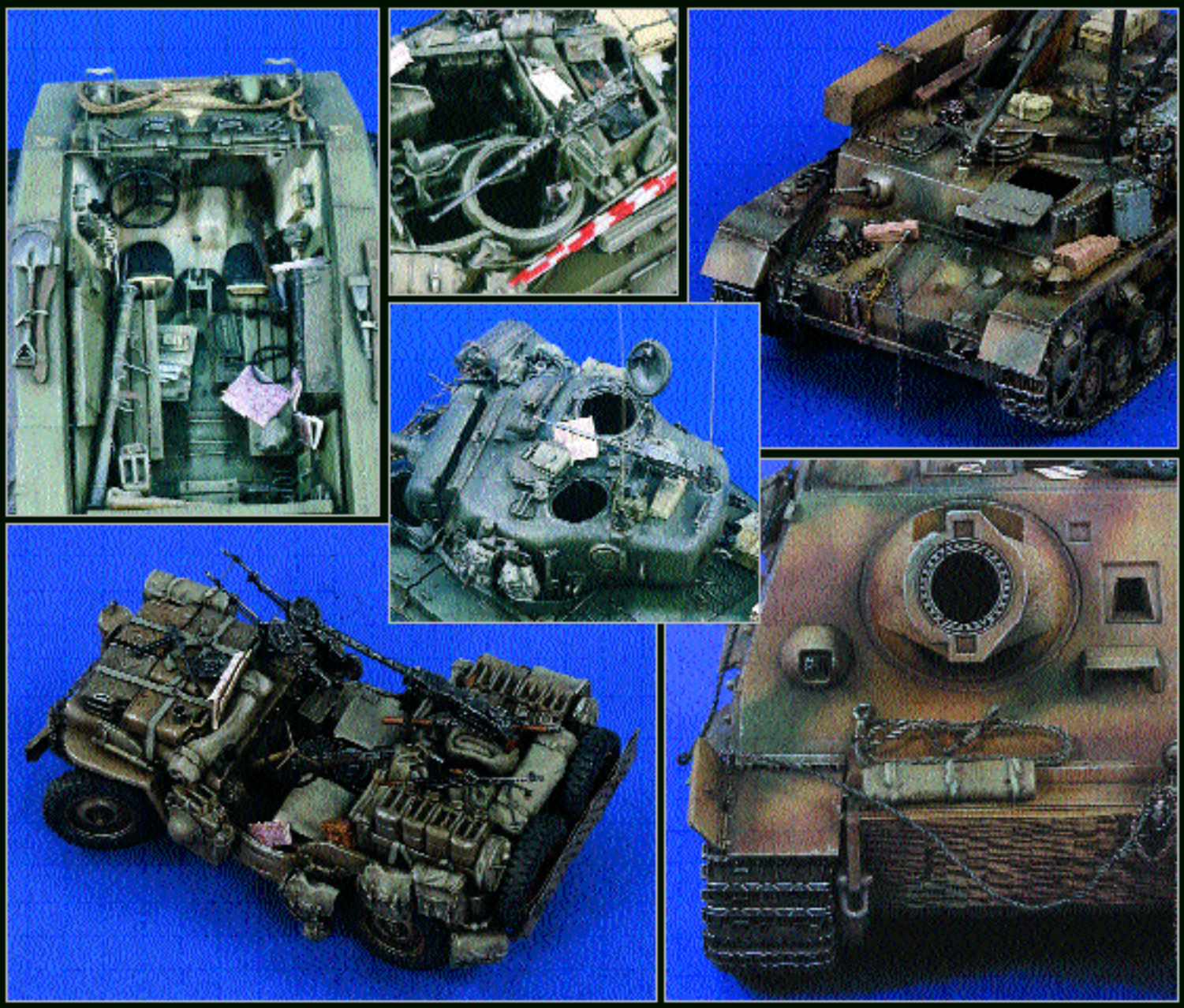
VERLINDEN PUBLICATIONS

Building, Detailing, Painting and Weathering

MILITARY VEHIICLES

Vol.II

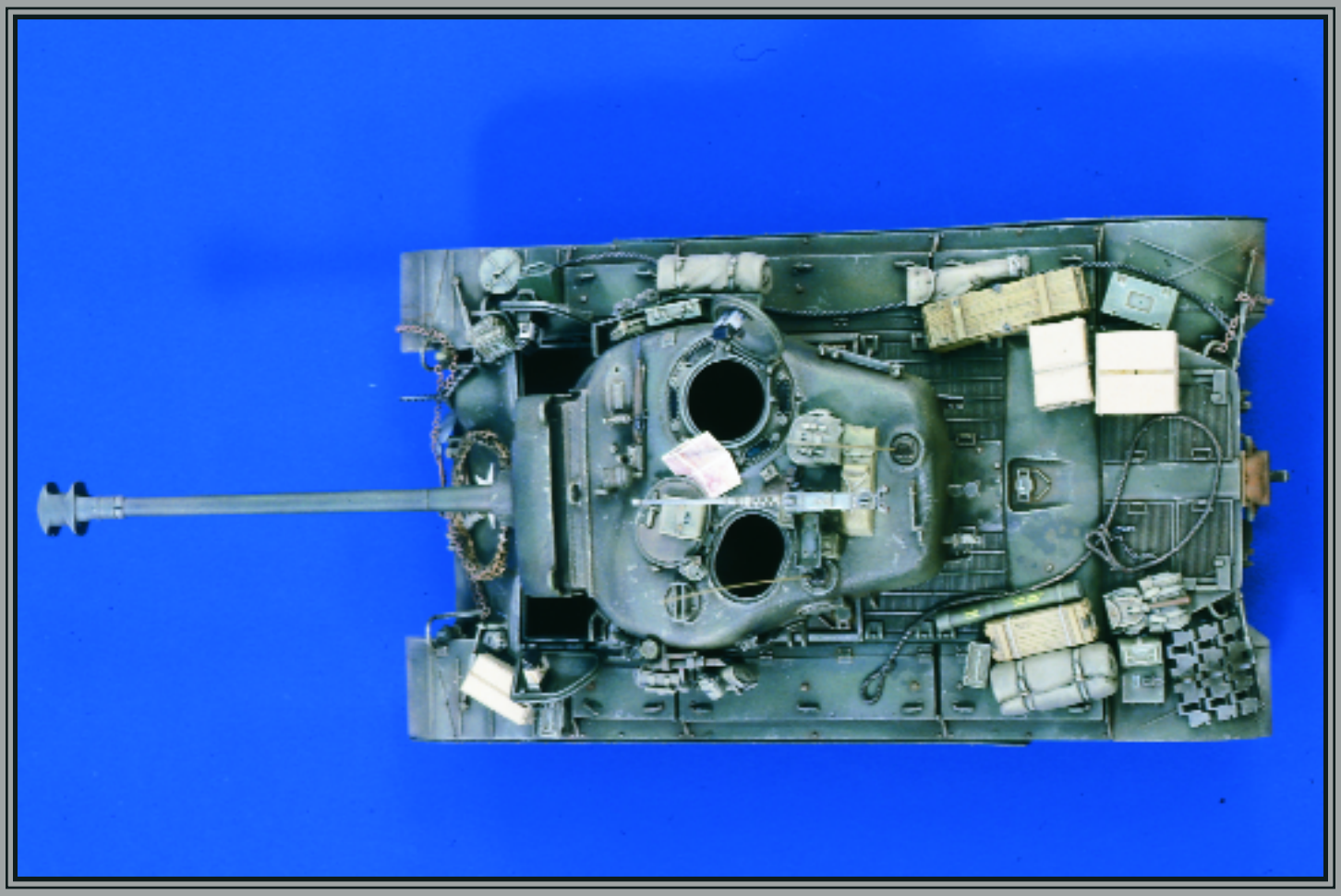
Illustrated with over 100 full color Photographs.



N°1587

Military Vehicles Vol.II

Building, Detailing, Painting and Weathering.



Verlinden Publications

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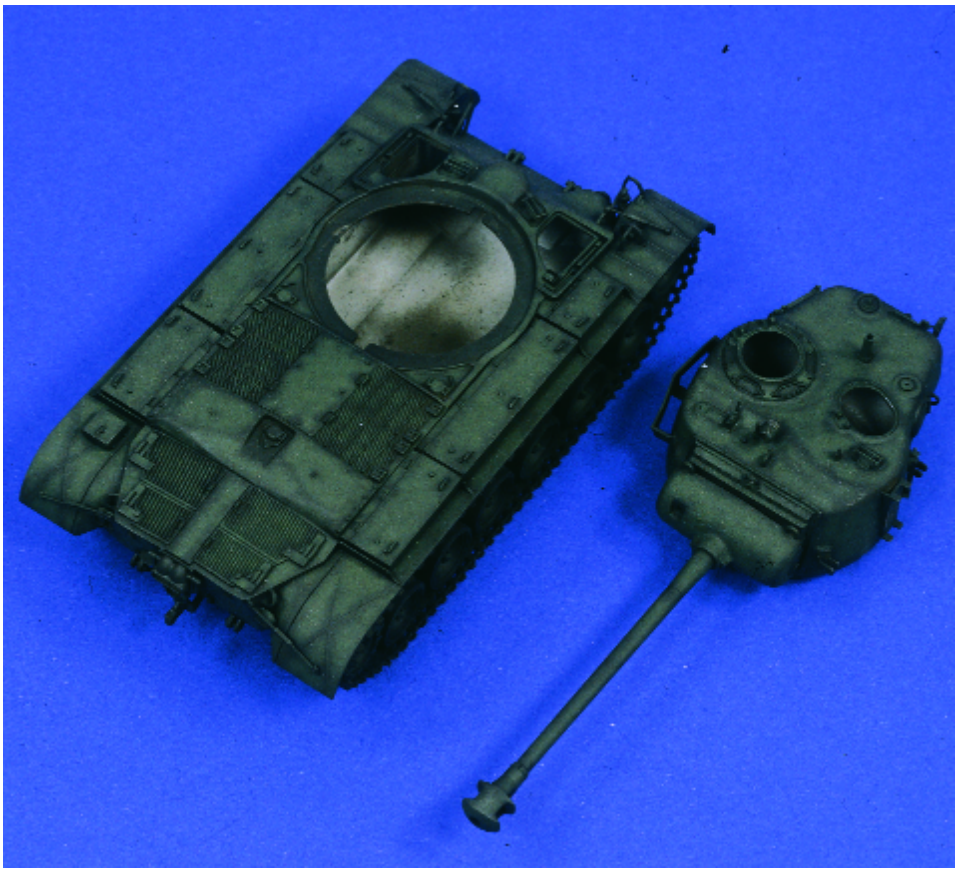
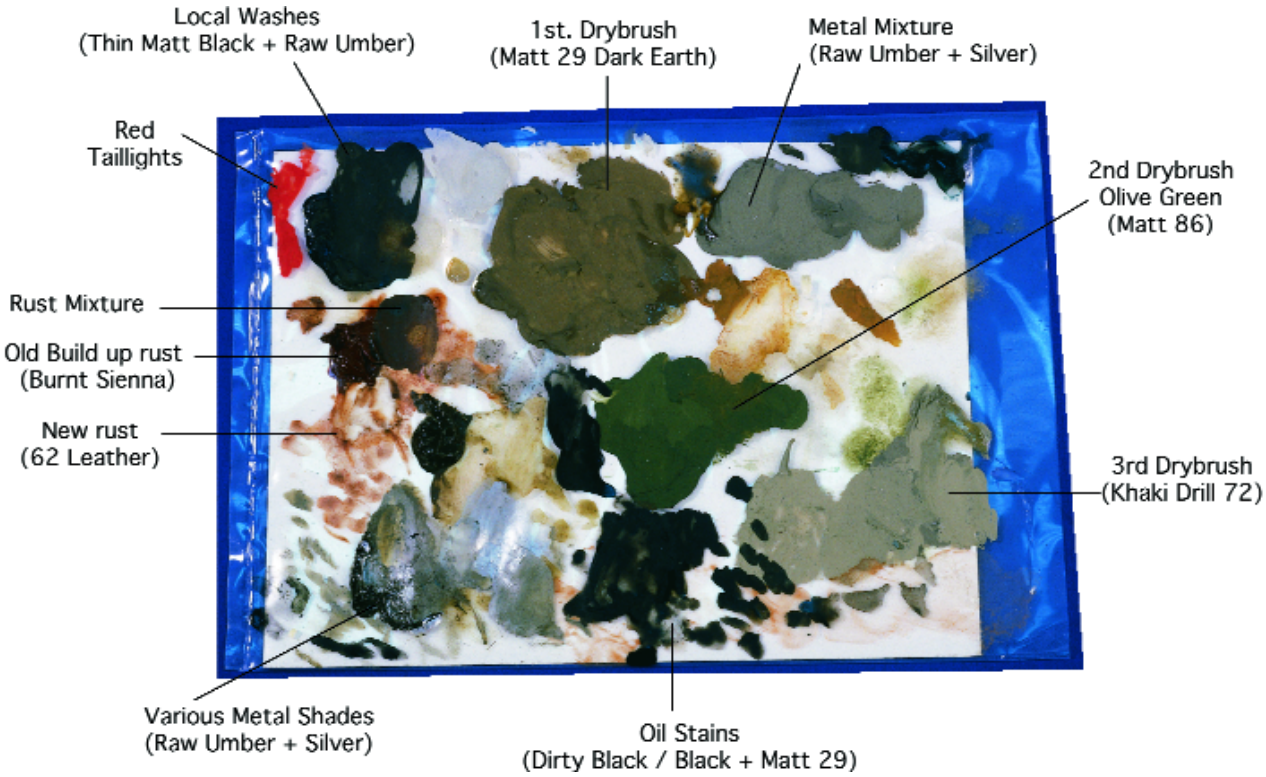
WEATHERING DRAGON'S T-26E3 GENERAL PERSHING
By VP Studios

In an effort to develop a new medium tank superior to the "Sherman" series, the T-20 series program was launched in the spring of 1942. The new tank design was to take advantage of engineering lessons learned after the development of the "Sherman", as well as lessons learned in battle. After three years of development, the better armored T-26E3 was introduced into battle during the final months of the war in Europe. Powered by a new 500 h.p. engine and armed with the more powerful 90mm main gun, the "General Pershing" proved capable of destroying the heavily armored Tiger and Panther tanks of the Wehrmacht. The "Pershing" also saw action in the Pacific theater during the final months of WWII, as well as in the Korean war. The T-20 program provided valuable insight into the development of future tank designs, notably the development of the modern "Patton" series of main battle tanks, combining a powerful gun, high mobility, and as much armor as possible.

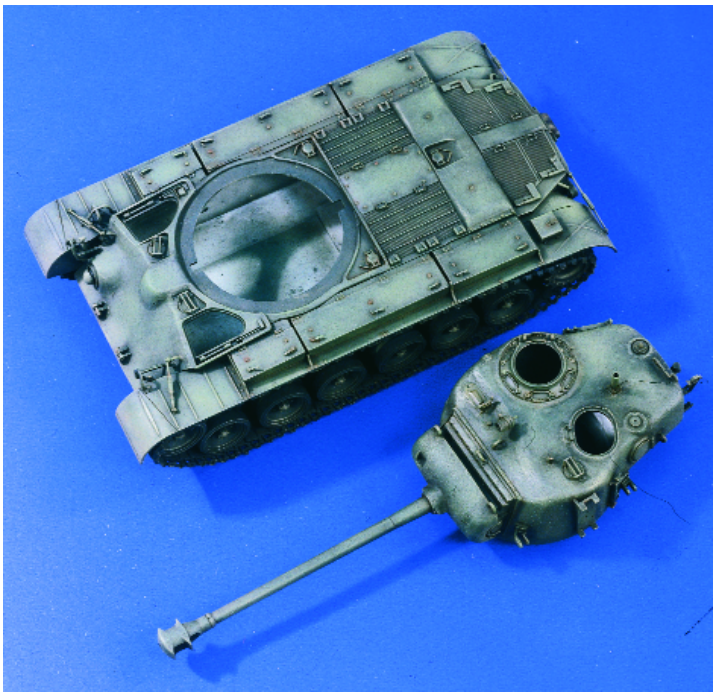
The fully finished model loaded with various gear and equipment.



The model after airbrushing. The overall base coat is a mixture of Humbrol matt 66 Olive Drab + matt 86 Olive Green + Flat Black. The second coat (Humbrol matt 159 Khaki Drab) lays the foundation early for the upcoming weathering process, which can clearly be seen in a cloud pattern highlighting the central areas of the larger surfaces, creating a sense of depth. After the paint dried thoroughly overnight, the whole piece was given a healthy coat of matt varnish to prepare the surface for the brutal weathering process.

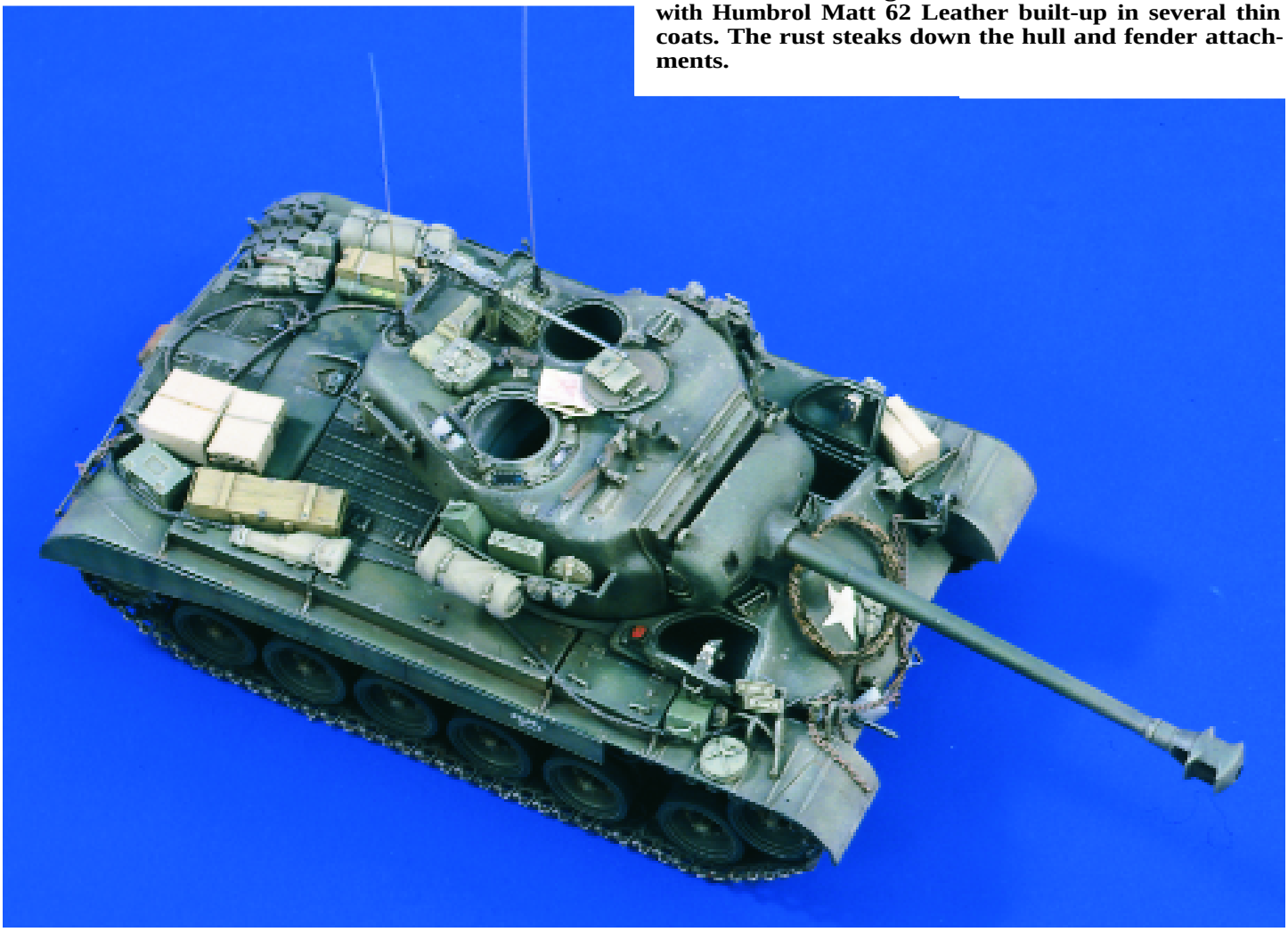


A white card inside of a poly-bag serves as the palette, here configured for painting and dry-brushing with the typical colors: Humbrol Matt 29 Dark Earth, Matt 86 Olive Green, Matt 72 Khaki Drill, different shades of metal (silver printer's ink darkened with enamels),and rust.

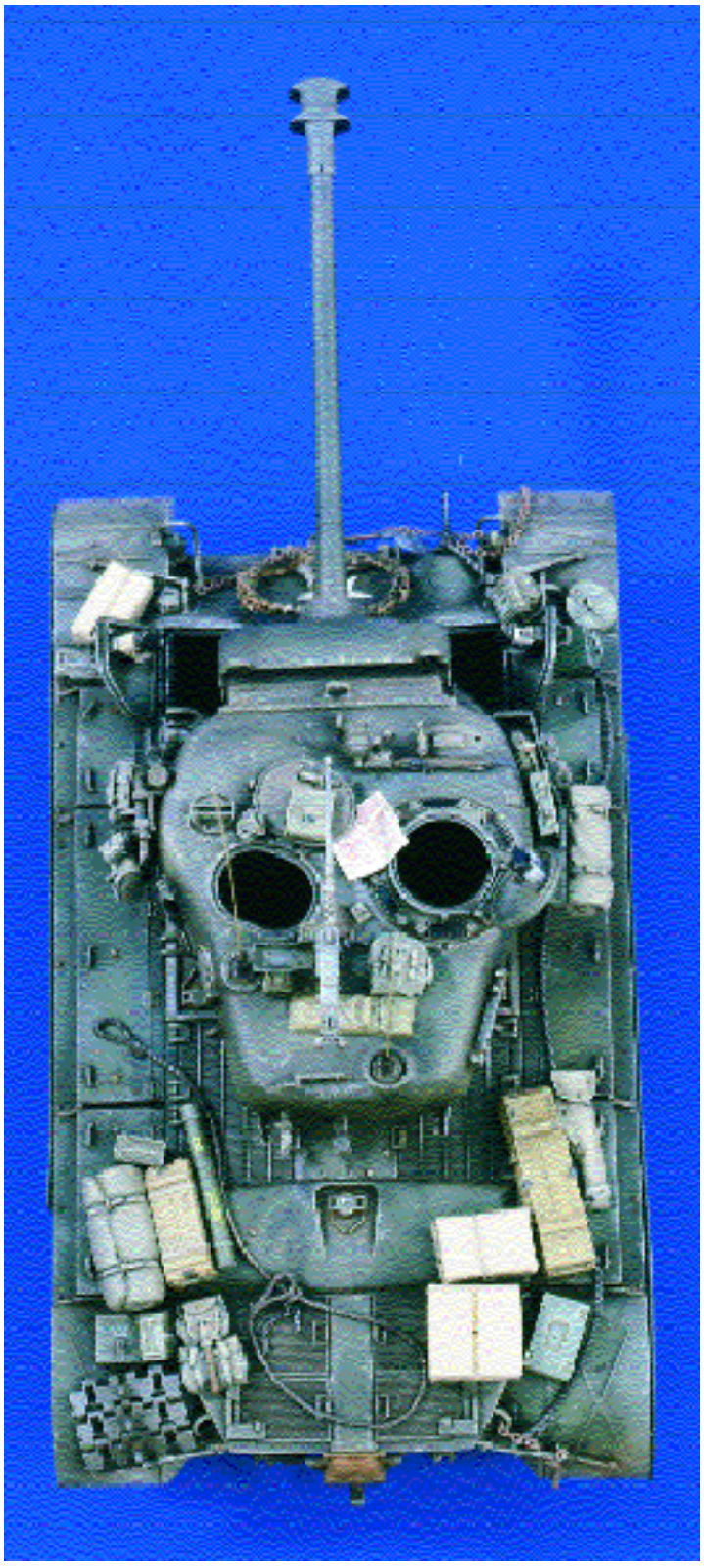


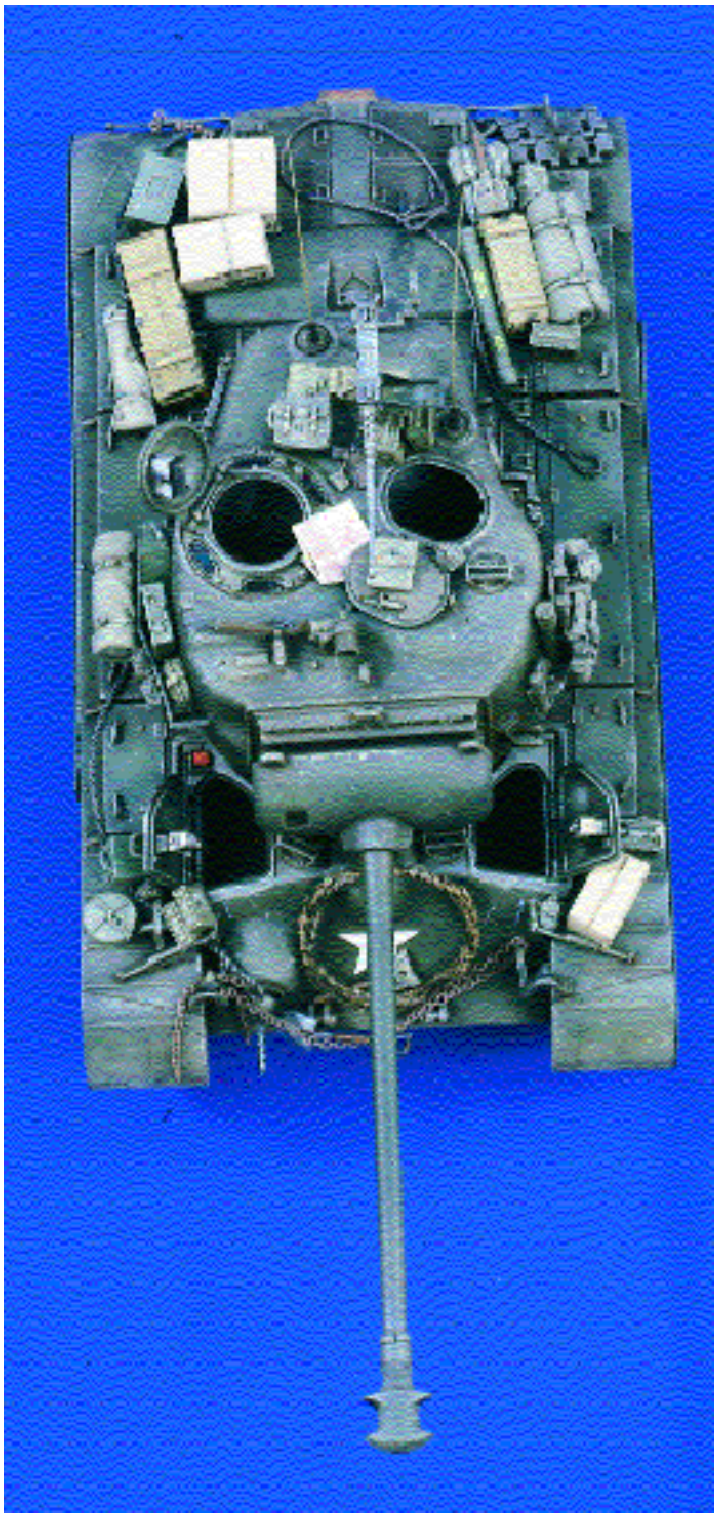
The model after it has been washed with Matt Black + Burnt Sienna oils. The wash effectively blends the cloud pattern over-spray into the base coat, and "ages" the paint, creating shadows and depth.

The rear end showing the burned, rusted exhaust, made with Humbrol Matt 62 Leather built-up in several thin coats. The rust steaks down the hull and fender attachments.



This overview shows the stowage of the various gear and equipment: c-rations, ammo cases & boxes, tent-packs & bedrolls, tow chain, barbed wire bundles and maps (all selected from the VP line). Note the use of the VP cal. .50 machine gun, cal. .30 barrel, periscopes, and antenna mounts; all small improvements that make a difference.





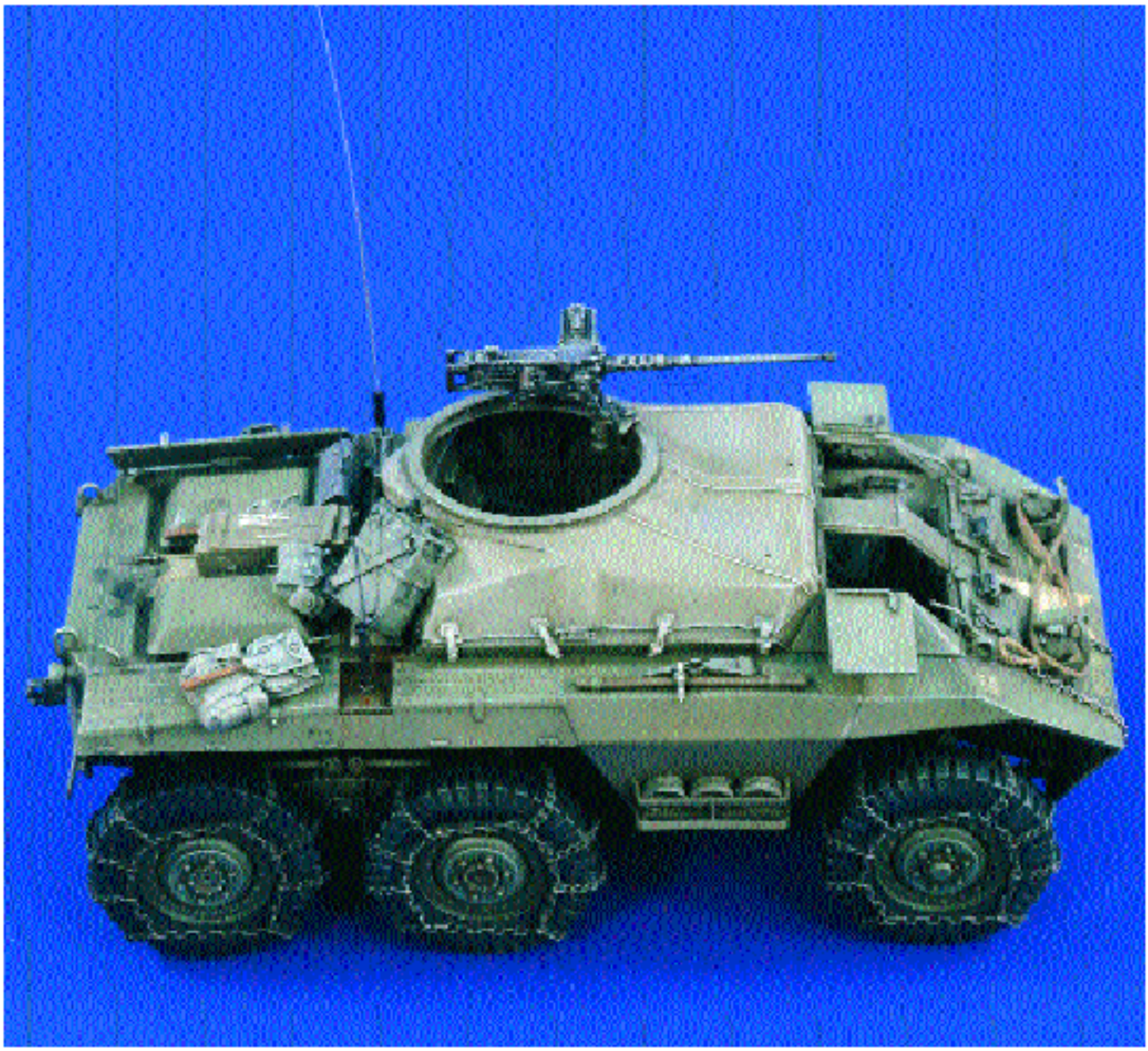
This picture illustrates the result of thoughtful weathering : various shades of browns, greens, tans, metal, and rust flowing into each other and mixed together by dry-brushing and local washes.

The oil & fuel stains (Matt Black, Raw Umber, & Burnt Sienna) on and around the engine deck are overlapping and intermixed. The engine deck is the most "weathered" area on a tank, as are the filler caps for oil & fuel. In this picture note the new tow cables made from nylon chord painted flat black and dry-brushed dark metal.

Superdetailing Tamiya's M20 Armoured Car

with VP,s Interior and Exterior Updates - Tire Chains

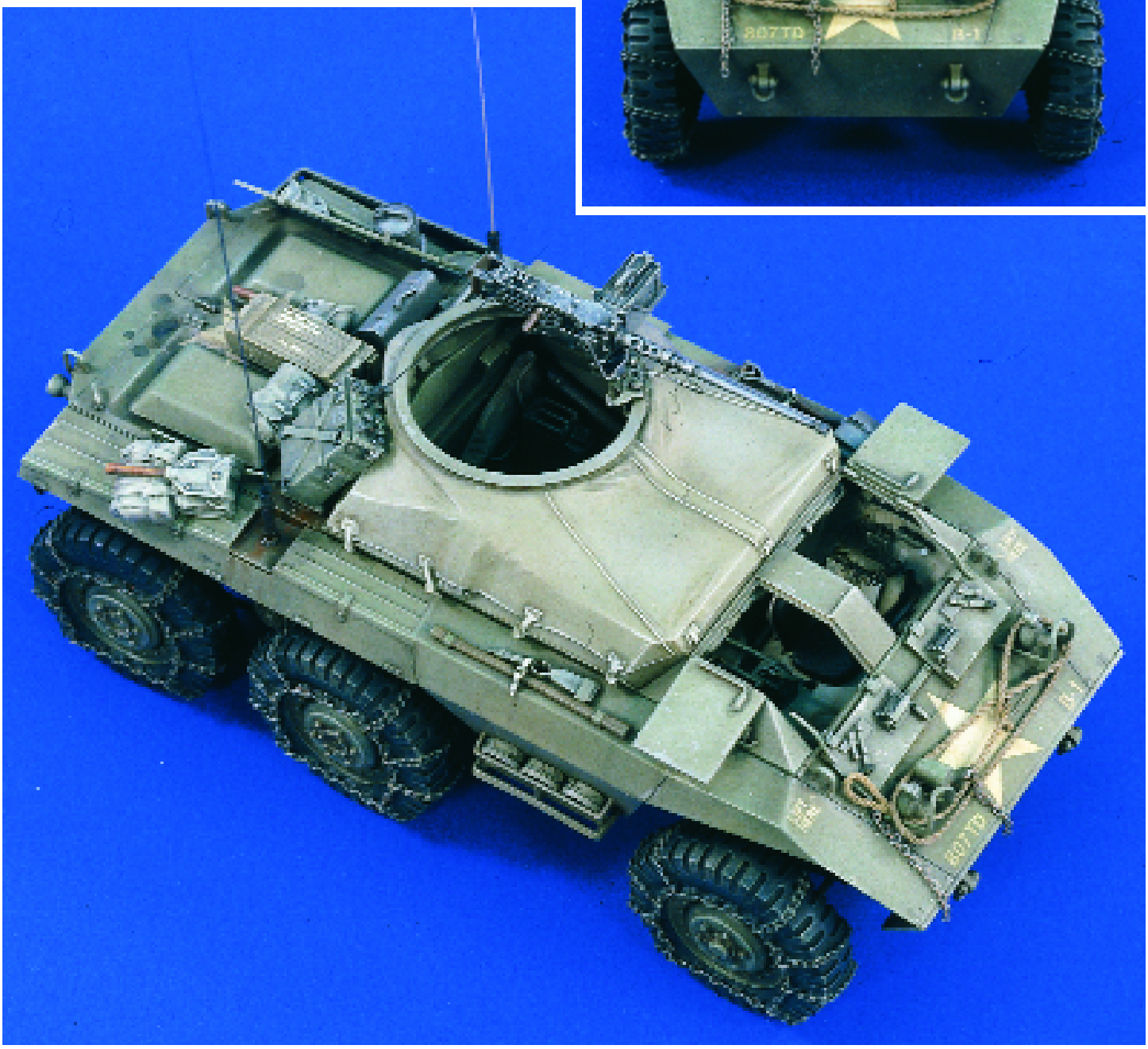
by VP studios

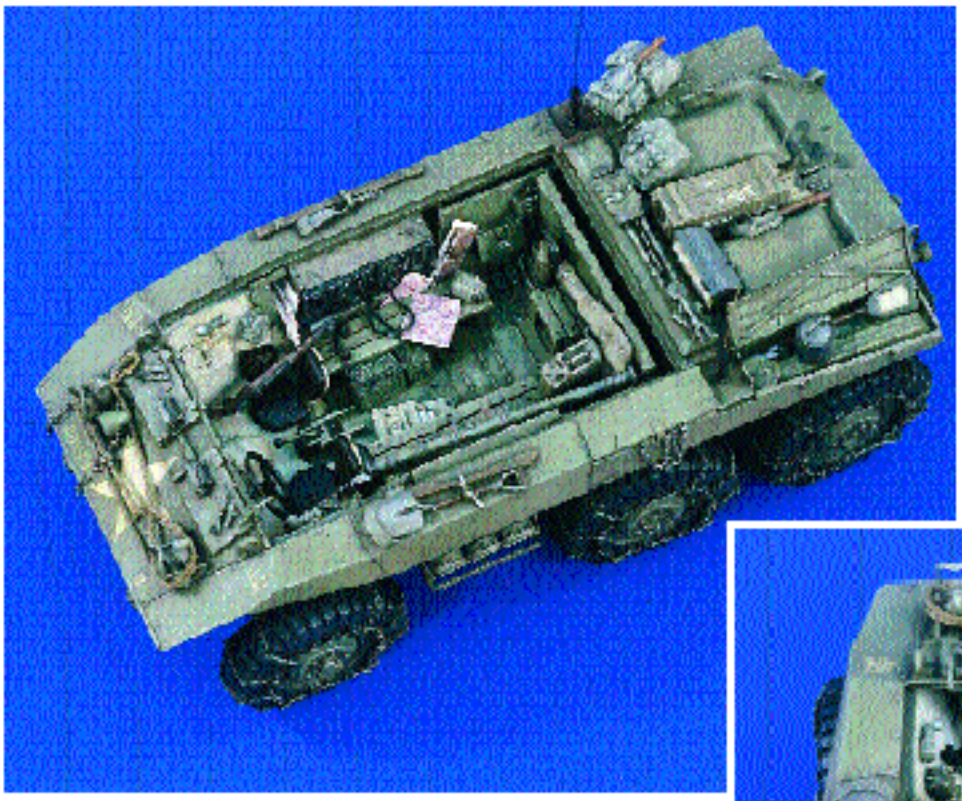


Tamiya's impressive M20 after receiving the full VP treatment. Note the very realistic alignment of the tire chains, giving the impression that they have recently been installed for a special cross-country deployment.

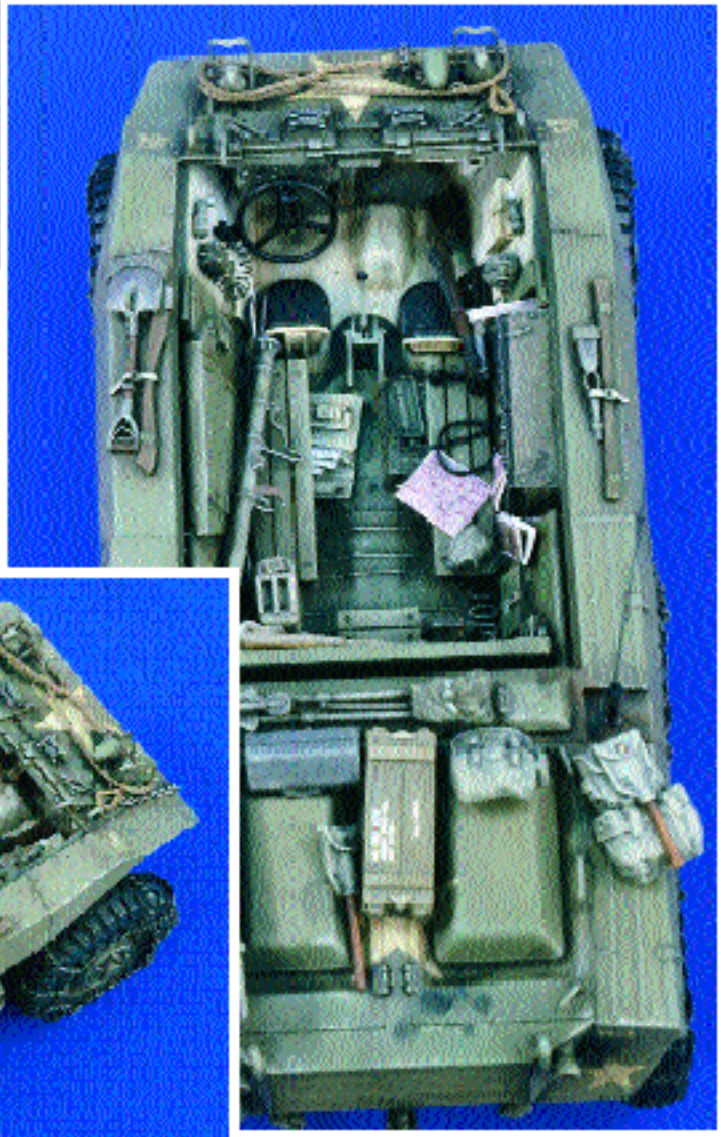
Adding extra gear and equipment to a military vehicle can really help to breathe life into a model. Note the rope and chain wrapped around the headlights, giving the model a used appearance.

This angle displays perfectly the effectiveness of good painting and weathering techniques on a plain Olive Drab vehicle. After washing with Raw Umber oils, the entire vehicle was dry brushed with Humbrol matte 72 Khaki Drill.

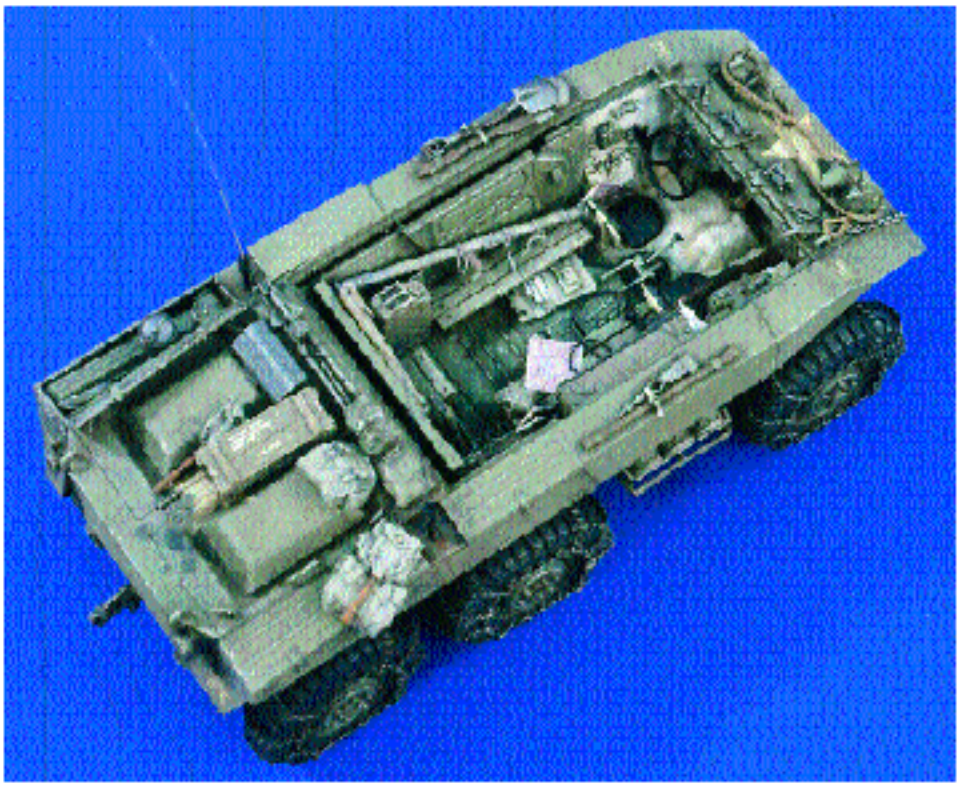




This view of the interior helps to show off the effectiveness of the various gear and equipment stowed inside, adding both scale effect and a cluttered, lived in appearance. Note the all too important maps laying in convenient reach of the crew, a necessity when patrolling through unfamiliar territory.



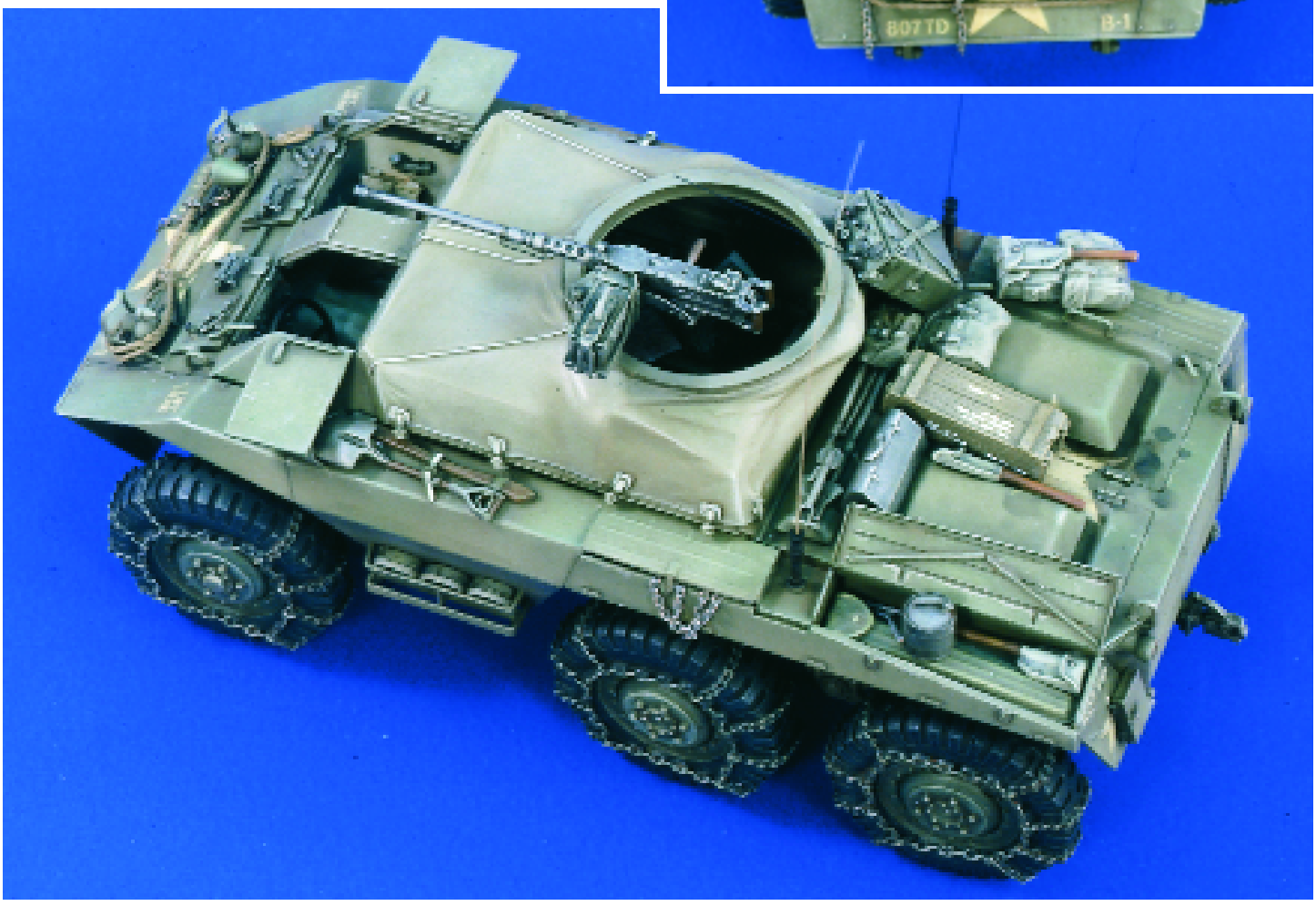
The interior of the M20 was fully dressed-up with VP update #1493. Note that the floor and walls visible through the MG ring aperture are painted in the same Olive Drab as the exterior of the vehicle, helping to camouflage this vehicle from the air.



This view imparts an impression of the cramped quarters the M20 crew had to work in. Note the personal equipment and weapons at the ready, just in in case...

The rear of the vehicle showing various equipment hastily stowed on and around the engine deck. Note the fuel spills on the engine deck doors, and the soot stains around the exhaust pipe.

The opened tool box and stowage give this model a very lived in appearance. Note the length of chain hanging out of the closed tool box. The very realistically painted and weathered .50 calibre machine gun also adds a critical point of interest to the top of the vehicle, enhancing the sense of depth created by the MG ring aperture.

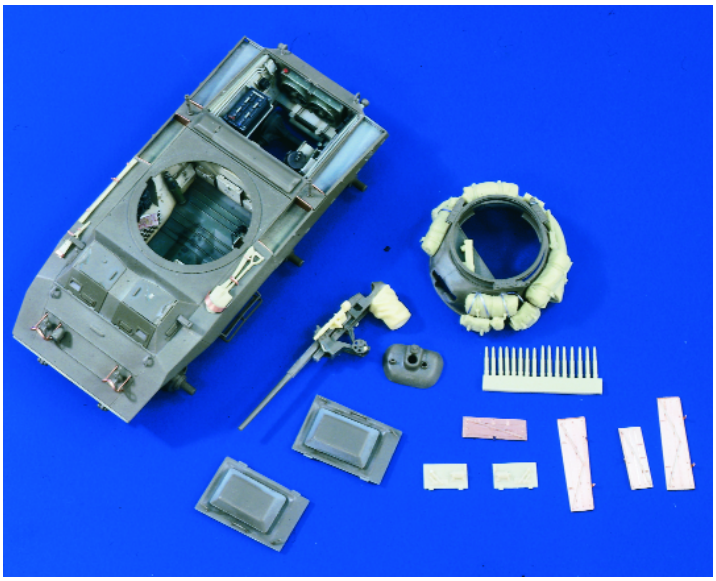


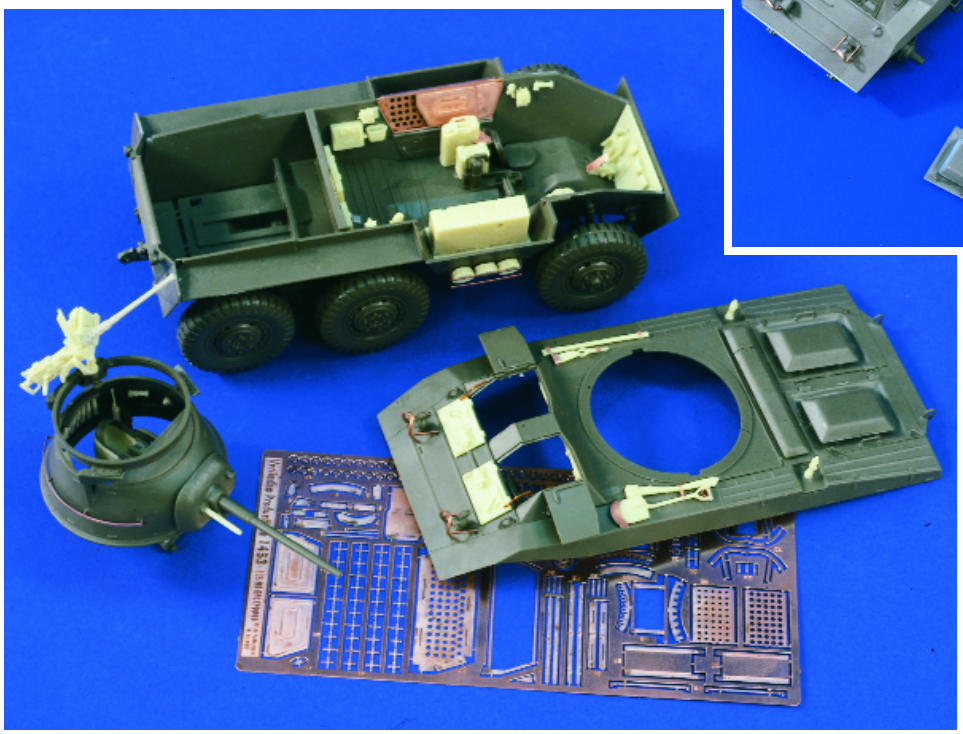
SUPERDETAILING TAMIYA'S M8

By VP Studios

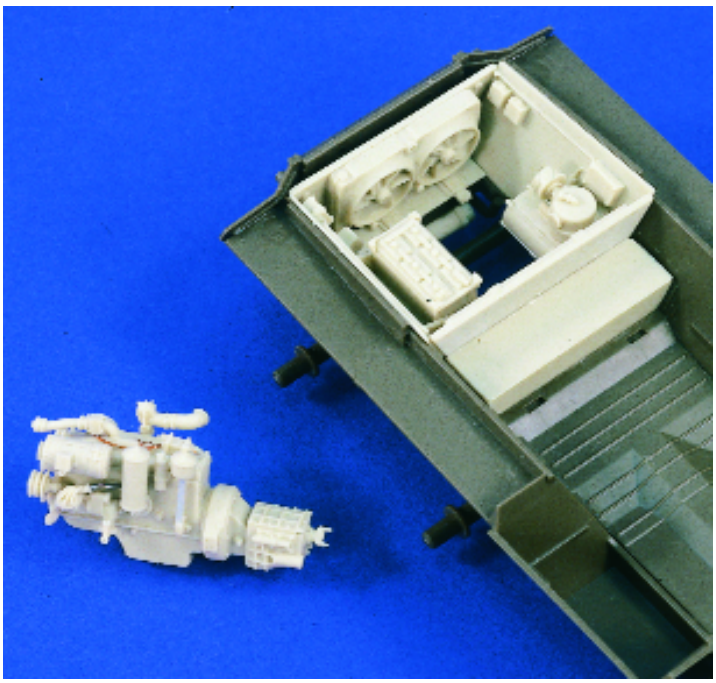
Originally developed by Ford as an armor support vehicle, the M8 "Greyhound" series armored car proved to be an ideal reconnaissance and escort vehicle. Reaching speeds of 88 km/h (56 mph) with a maximum range of some 563 km (400 miles), the rugged six-wheeled light armored car provided protection to it's four crew-members with steel plates ranging from 19mm to 32mm thick (which was adequate for small arms and shrapnel). Armament consisted of a turret-mounted M6 37mm main gun, a cal. .30 coaxial machine gun, and a traversable ring-mounted M2 cal. .50 machine gun. The "Greyhound" primarily served allied forces in Europe, although many were also deployed in the Pacific theater. Impressed with it's versatility, many countries continued to use the "greyhound" well after WWII.

VP #1453 M8 Interior & Exterior Update Set for the Tamiya kit provides plenty of high quality resin and photo-etched details, including the SCR 506 radio set, RC-99 interphone equipment, the M70D telescope/gun sight, M2 cal. .50 machine gun & M49 ring mount, spare anti-tank mines & mounting brackets, cal. .30 coaxial machine gun, driver's controls, spare 37mm ammo, pioneer tools & mounting brackets, headlight brush-guards, antenna-mast stowage, spare jerry cans, extra cal. .30 & .50 ammo boxes, M1944 combat & cargo packs, canteens, M1 carbines, and much more.

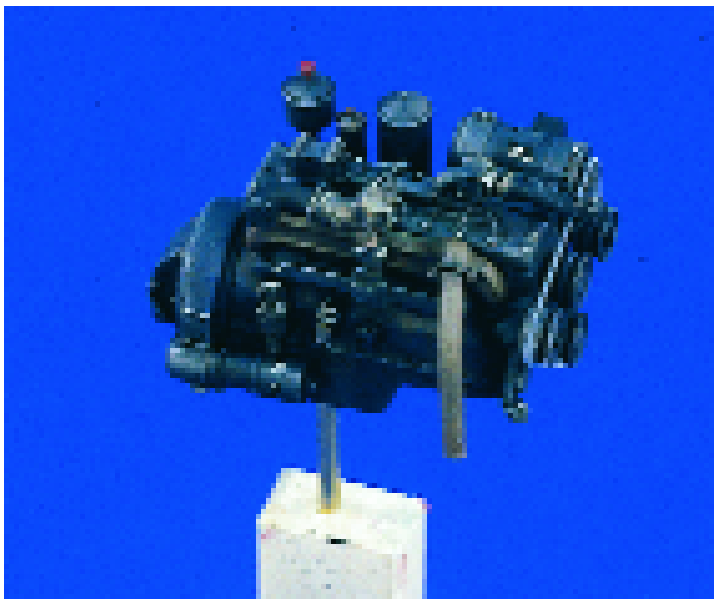




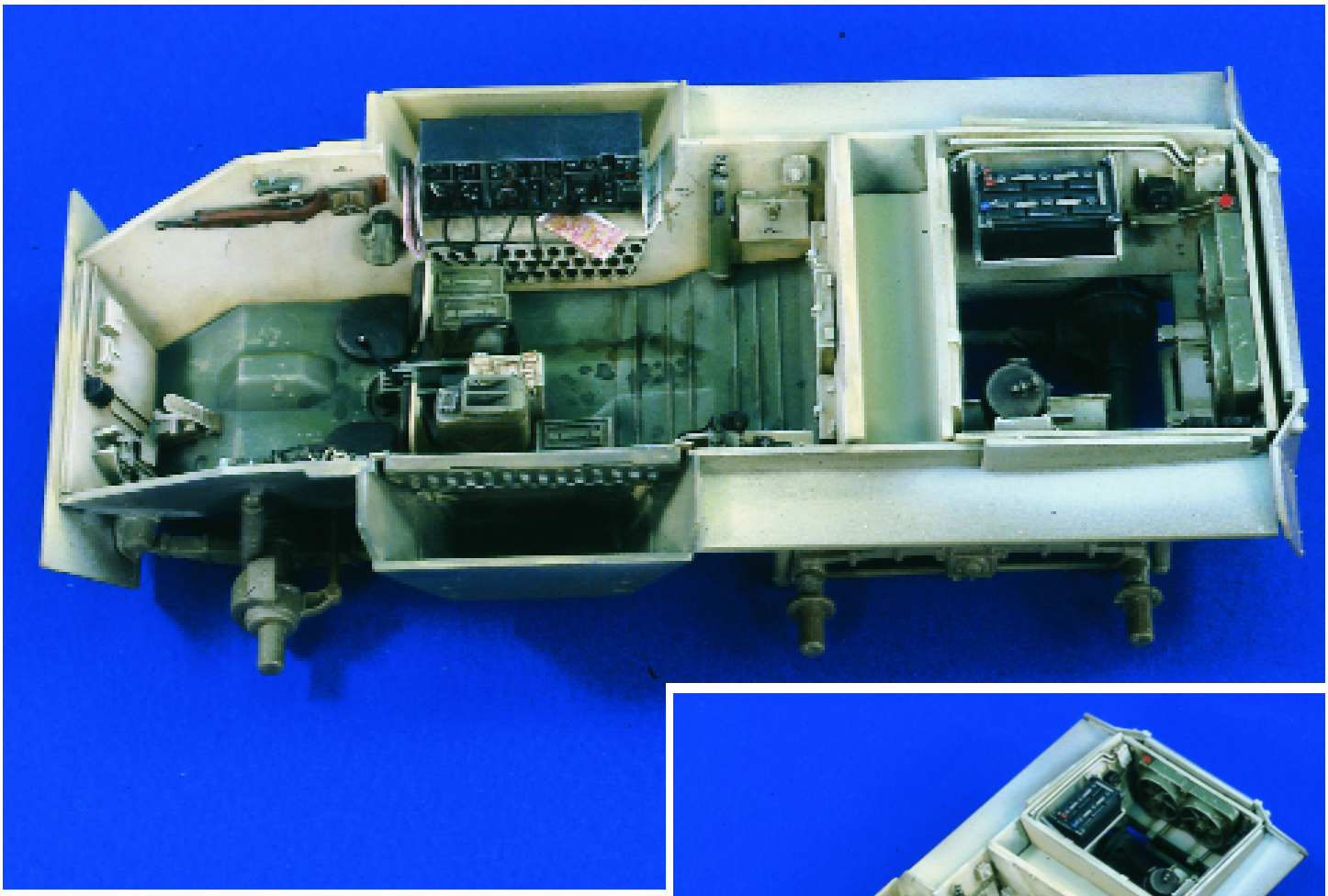
After the interior was painted and weathered, the hull was glued together and the exterior detailed. Broken down into subassemblies for ease of weathering later, the rest of the model is ready to be painted. Note the photo-etched stowage compartments (VP#1455).

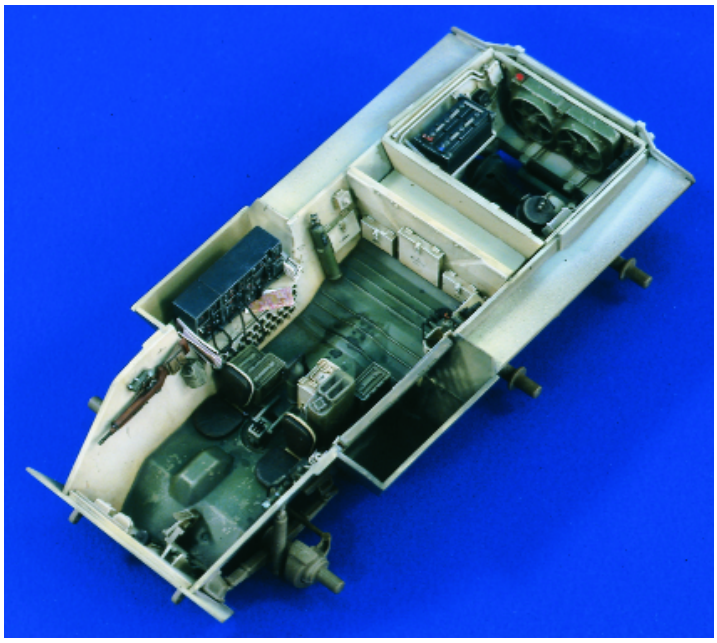


The comprehensive VP #1442 M8/M20 Engine & Compartment was built up and test-fitted before installation. We decided to display the engine outside of the vehicle for an engine-change diorama...



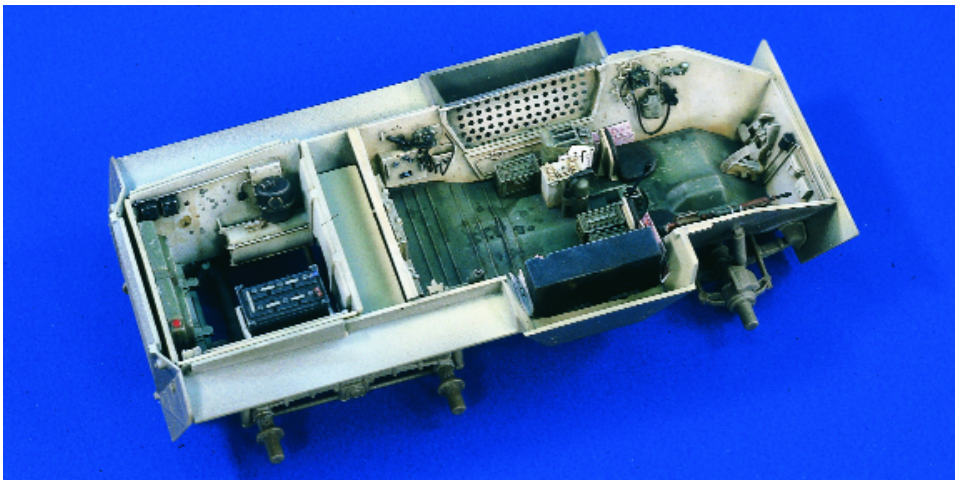
The assembled and painted engine is quite a jewel. It was base-coated in Dark Blue, then washed with mixtures of Raw Umber, Burnt Sienna, and flat Black oils. Note the burnt metal on the exhaust collector, and the fuel and oil stains. Overall metallizing was done by dry-brushing a dark metallic mixture of Raw Umber oils and Silver printer's ink.



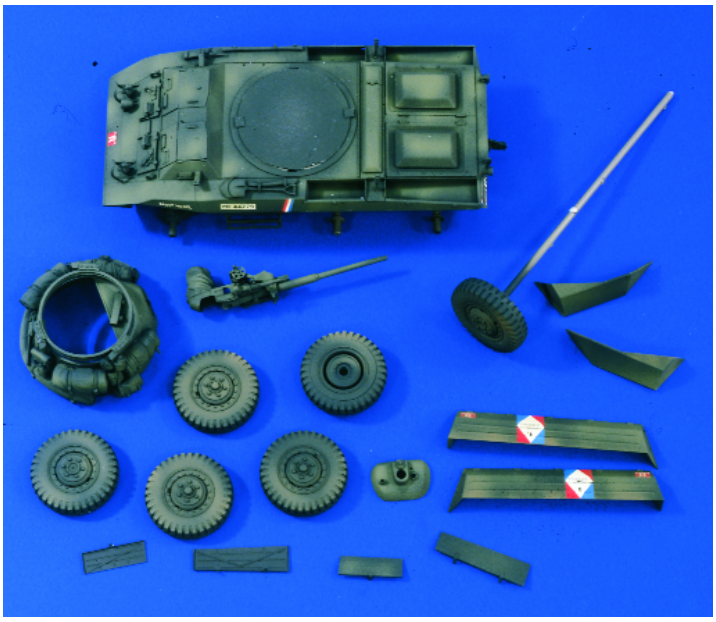


After assembly, the interior was base-coated with an off-white, washed with Burnt Umber oils, and dry-brushed with Flat White. The floor was airbrushed with Humbrol matt 66 olive Drab, washed with mixtures of Raw Umber, burnt Sienna, and Flat Black oils, then dry-brushed with a mixture of Humbrol matt 159 and Yellow. Note the fuel and oil stains and chipped paint on the floor. The radio was detailed with wiring and car eful hand-painted stencilling.

To simulate worn leather, the seats were painted Flat Black and dry brushed with Burnt Sienna.

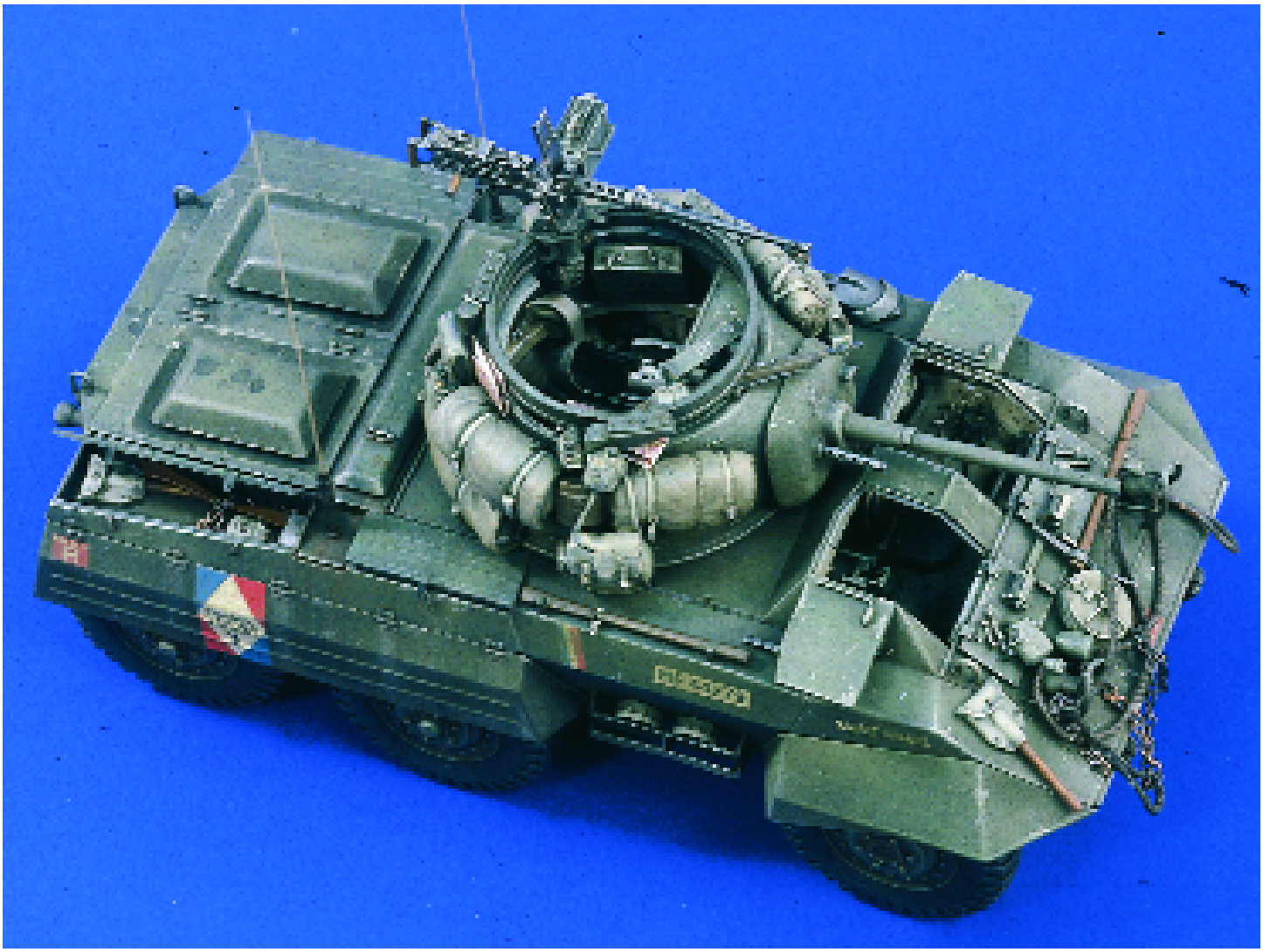


The engine compartment was weathered with local washes to simulate fuel & oil stains and rust streaks. The fan shrouds were dry-brushed with darkened silver printer's ink to simulate chipped paint. The intercom boxes in the forward compartment were wired with copper wire. Note the stowed maps & equipment.



The fully airbrushed model ready for weathering. The overall base coat is Humbrol matt 66 Olive Drab, and the cloud pattern over-spray is Humbrol matt 159 Khaki Drab. The lower suspension was lightly airbrushed with Humbrol matt 29 Dark Earth to simulate road-dirt. Before weathering, all parts were sealed with matt varnish.

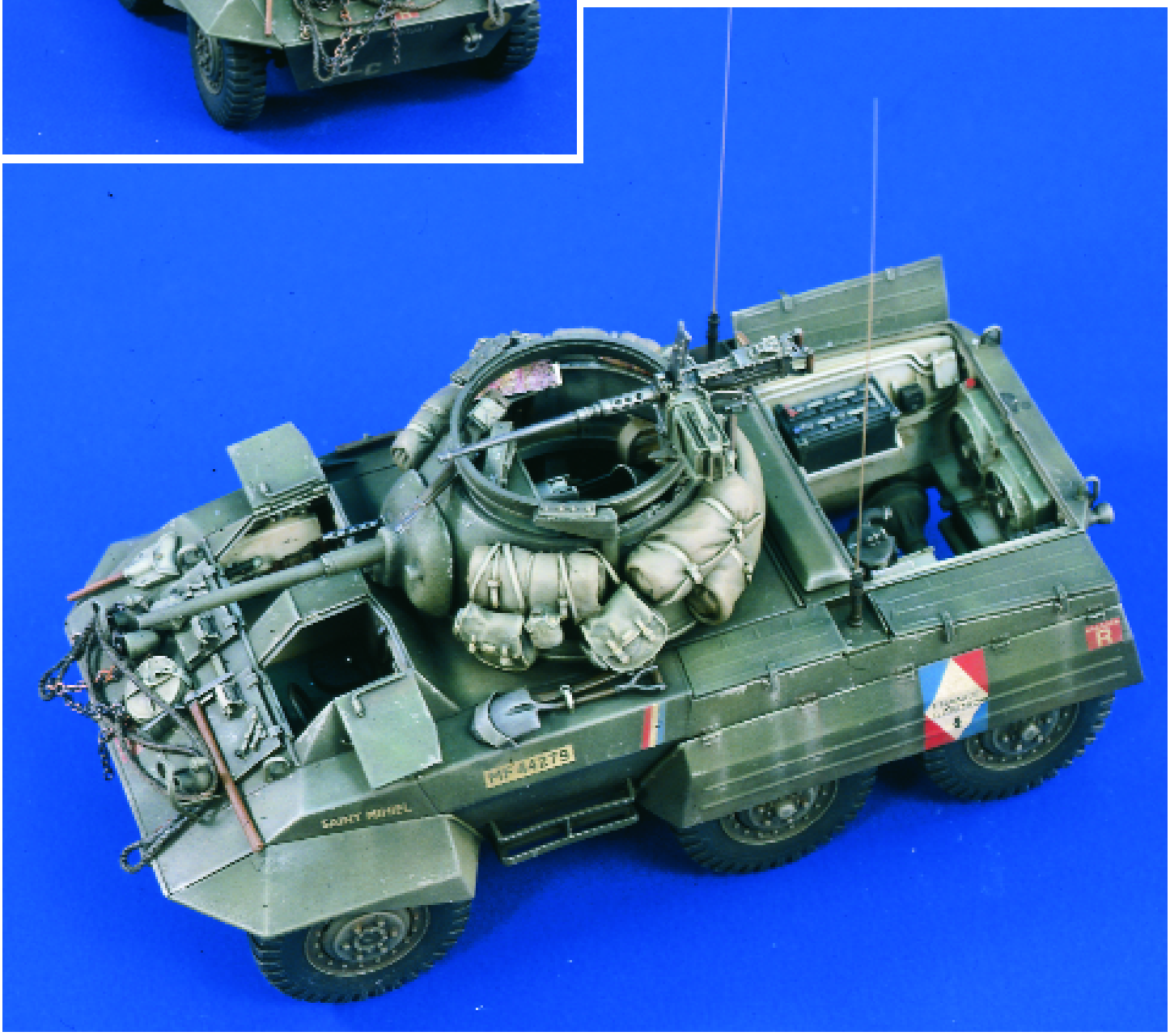
The tentpacks, bedrolls, & bags on the turret (from VP#1464 M8/M20 Stowage Set) were base coated with a mixture of Humbroll matt 72 Khaki Drill and Flat Black, followed by dry-brushing successive layers of Humbrol matt 72, and matt 72 + Flat White. Note the heavy metallizing on the machine gun ring.

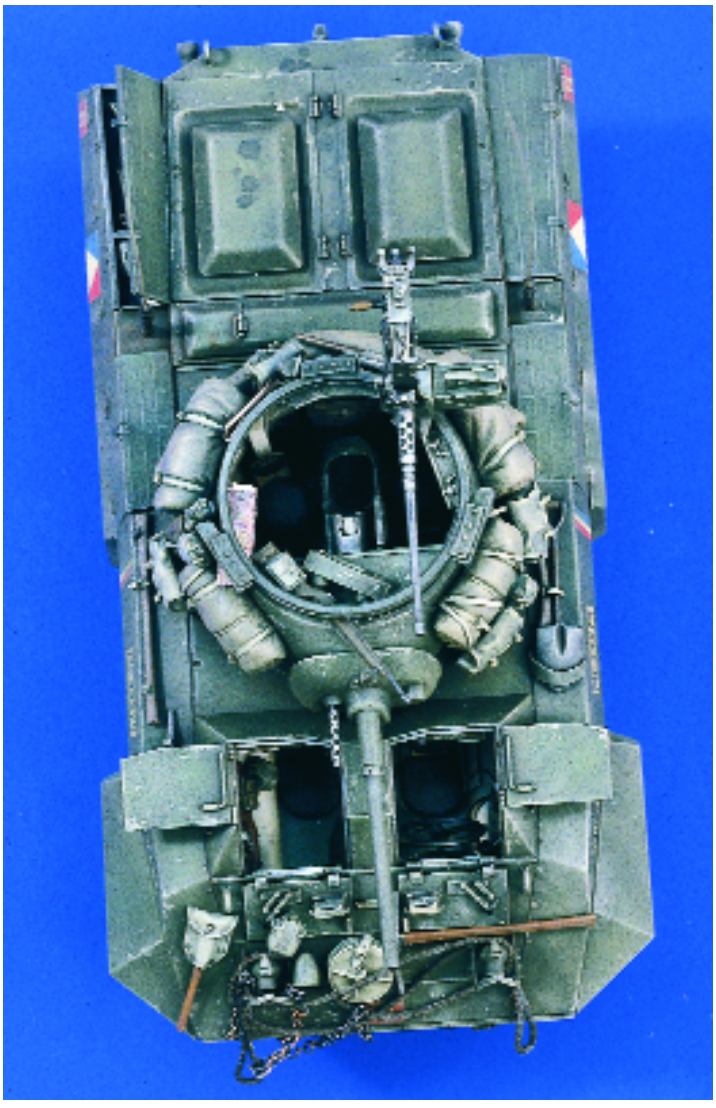


In order to maintain uniformity in weathering, all parts were washed with the same mixture of Flat Black and Burnt Sienna oils. Dry-brushing was done in successive applications of Humbrol matt 29 Dark Earth, Humbrol matt 159 Khaki Drab + Yellow, and Humbrol matt 72 Khaki Drill. The lower hull, chassis, and wheels were dry-brushed with Humbrol matt 29 Dark Earth + Flat White.
The tires were painted Flat Black and dry-brushed with Humbrol matt 29 Dark Earth.

The tow cable was made from nylon chord painted Flat Black and dry brushed with a mixture of Silver printer's ink and Raw Umber oils. Note how the various equipment fills the empty space on the front, including tow chains, collapsible water bucket, canteen, and entrenching tool, all from VP.

Depth is enhanced when the engine and cover are removed, and the added detail in this area becomes immediately apparent. The chipped paint effect was achieved using a very fine pointed brush in a mixture of Raw Umber oils and Silver printer's ink. Additional metallizing was done by very light dry-brushing around all corners and edges. The cal. .50 and spade blade were base coated in semi-gloss black and dry-brushed with the same metallic mixture.





This bird's eye view shows the heavy weathering on the engine deck, with lots of chipped paint and fuel & oil spills, particularly around the fuel filler areas.

The crew climbing on and off, in and out, several times a day causes heavy weathering around the hatches: faded, polished, chipped-off paint, full of all kinds of stains. Note the metallized, polished gun breech through the open turret.

To add more color to this model, French Free Forces markings were used from the Tamiya kit-supplied decal sheet. Note the dust streaks running down the sides, achieved by dry-brushing with the edge of a brush using Humbrol matt 72 Khaki Drill.

STURMTIGER

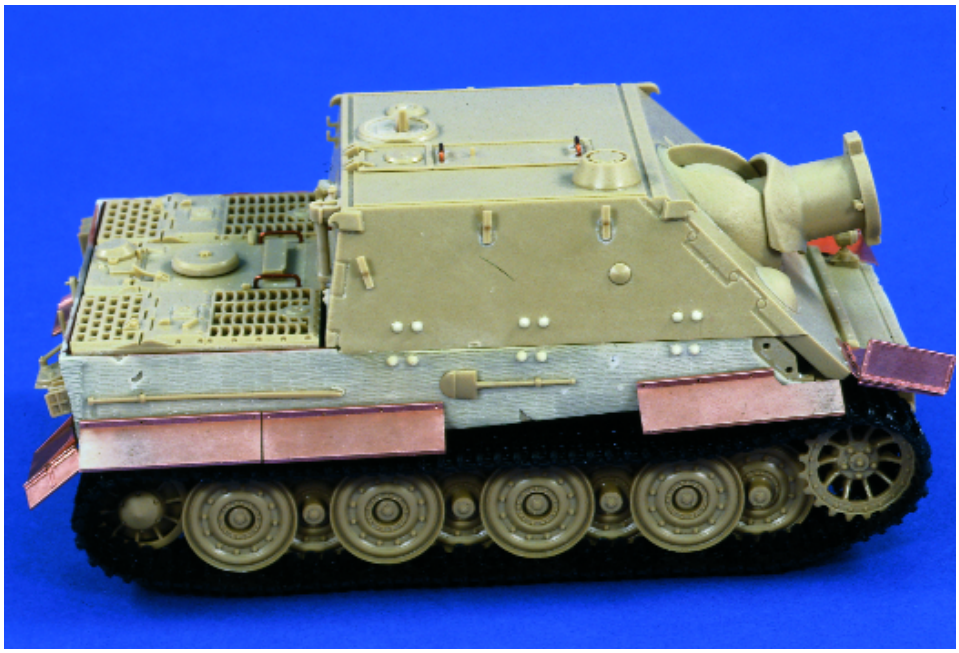
Detailing and Painting Tamiya's Sturmtiger

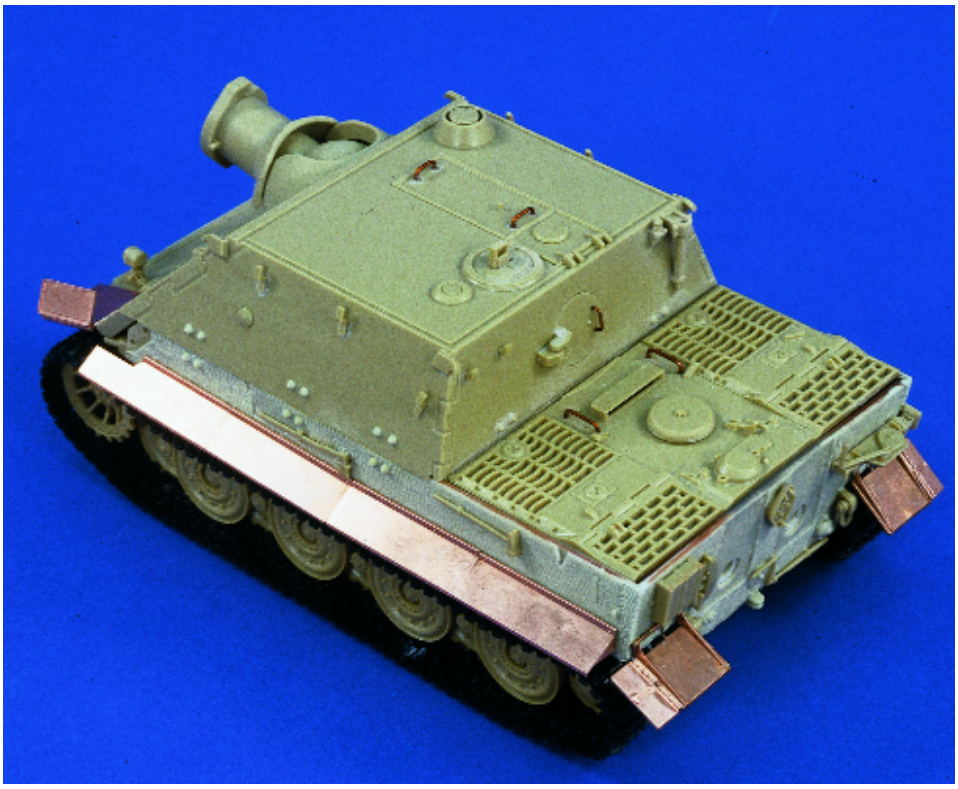
by VP Studios

As if the Tiger I wasn't imposing enough, a 38cm mortar version of the famous Tiger was ordered in August 1943. The hull and suspension of the Tiger remained the same, but the superstructure was modified to accept a large box-like superstructure to house the monstrous 38cm mortar. This increased the weight of the beast by some 8 tons to a total of 65.

The Sturmmörser Tiger fired rocket-assisted projectiles up to a range of 4,600 meters. It carried 14 of the 38cm rounds and had an on-board crane to lift them through the hatches.

Alkett converted 18 Tiger I into Sturmmörsers from August to December 1944. They were issued to three Strummörser companies and were employed in defense of Germany.

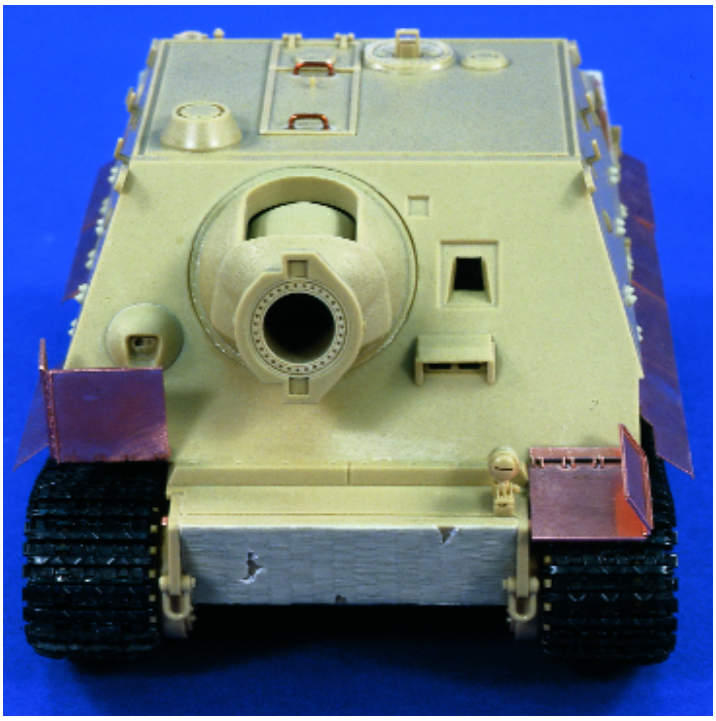




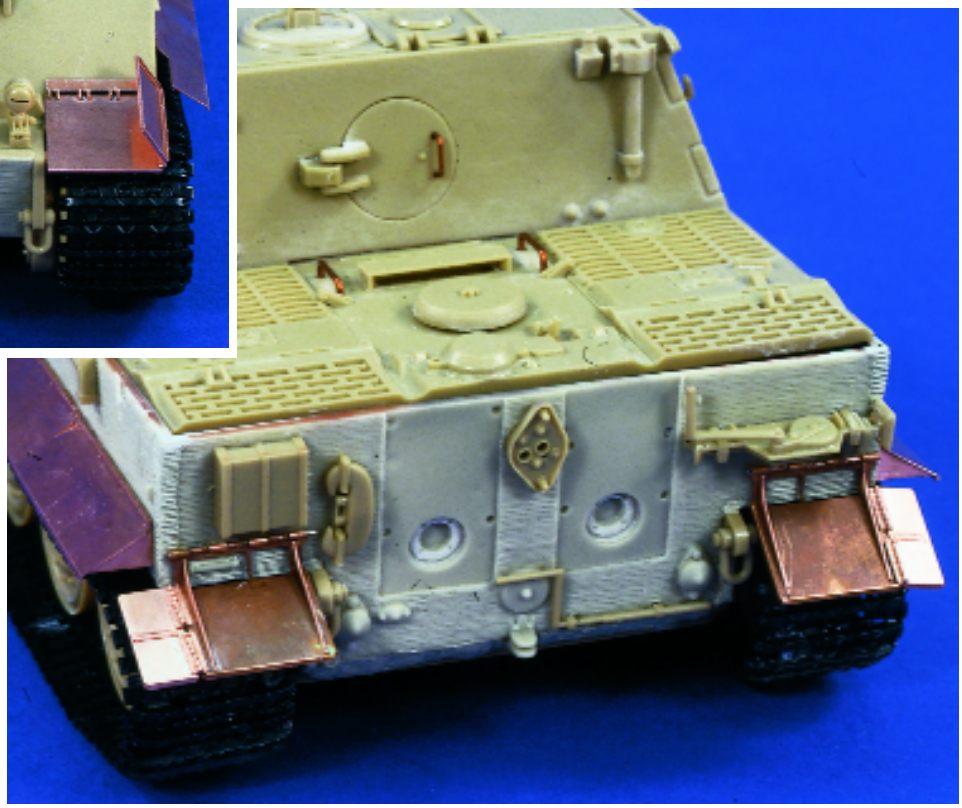
The Tamiya kit is assembled and ready for airbrushing. The missing fender section helps give the impression of wear and tear on the vehicle. The zimmerit sections are easily applied and can receive custom battle damage.

For this project, we use VP's Sturmtiger Zimmerit and Fenders (VP 1462), and Tiger I Rear Compartment (VP 1370) sets to upgrade the Tamiya kit (#35177).

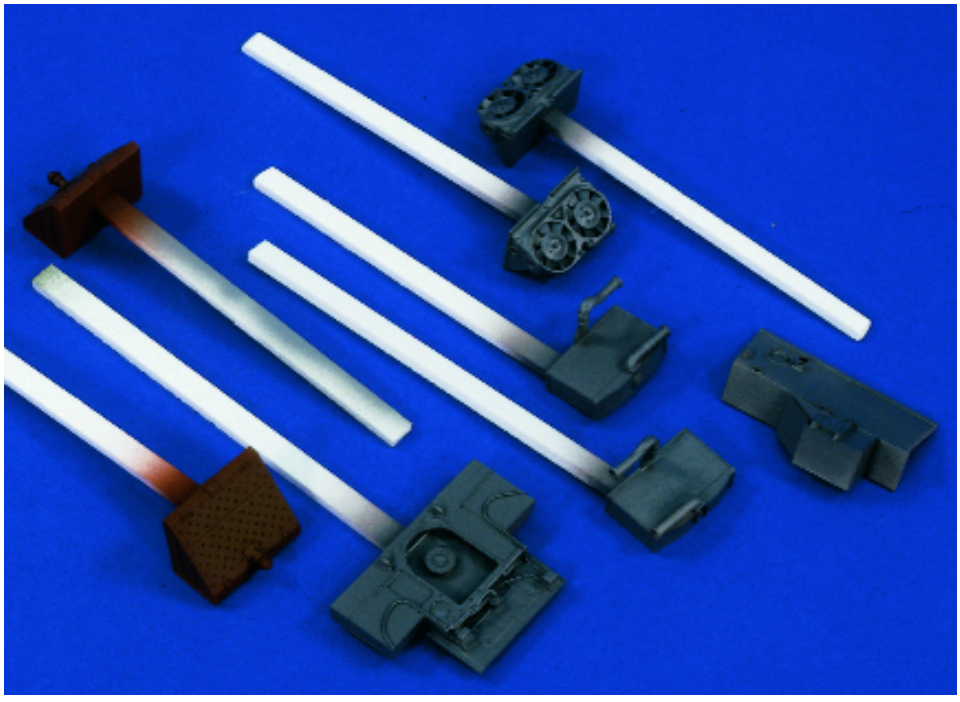
The photoetched fenders are in soft copper, so they are easily shaped as desired. The front and rear two-piece mud guards can be positioned as desired, as well. These were hinged, so they can be portrayed up, or down, or broken off. Note the hatch and engine compartment handles made from copper wire. These are more survivable during the painting process than plastic ones.



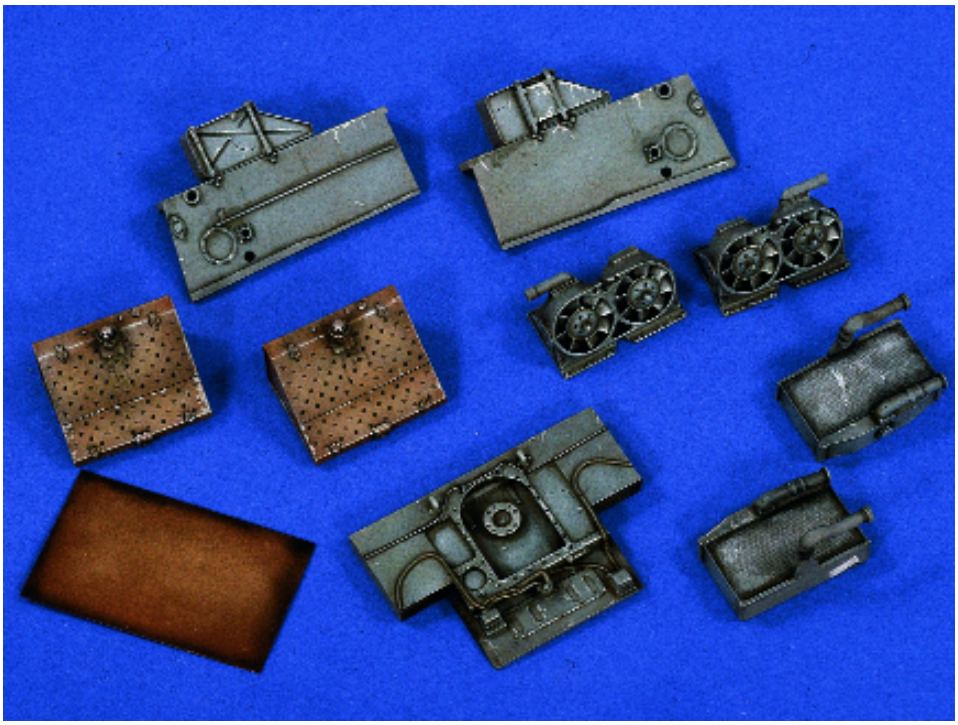
The resin zimmerit is damaged by cutting out small sections with a very sharp knife before gluing it to the model. Note the different positions of the mud guards.



This view clearly shows the zimmerit pattern on the resin rear hull plate. Kit detail parts have been added with super glue.

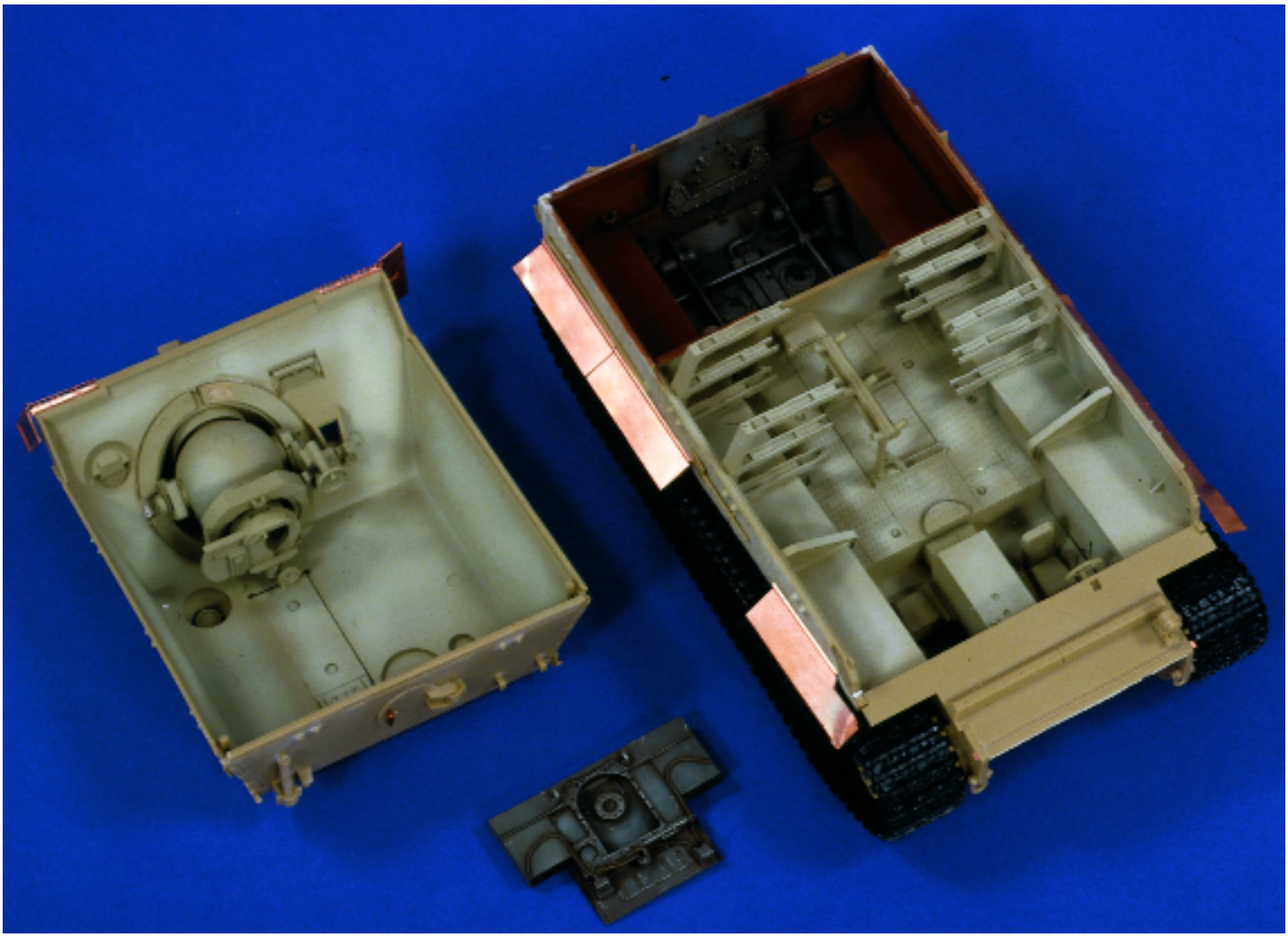


The resin engine compartment components are cleaned, test fitted and mounted on thick plastic strips for ease of painting. The side walls, radiators and fans are base painted Humbrol Matt 67 Tank Gray. Fuel cells are painted Matt 60 Scarlet, plus Matt 33 Black plus Matt 29 Earth. When dry, all are sealed with matt varnish.



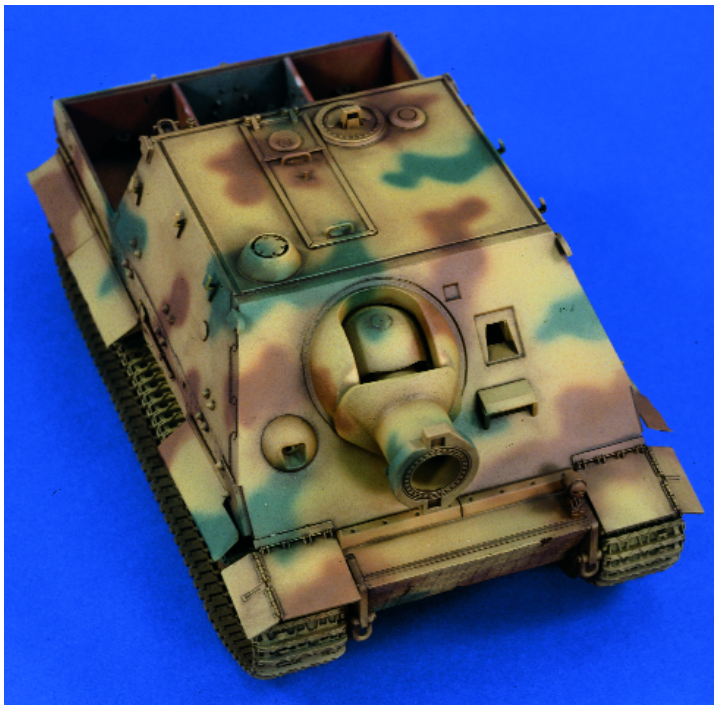
The separate parts of the engine compartment are finished and ready to install. To get here, we applied several washes of Raw Umber and Burnt Sienna oil paints, combined with Matt Black to achieve a dirty, oily look. Then drybrushing with light gray (Matt 27) and lighter mixes of the base color impart depth of color. The final touch is to hit edges and wear areas with a metal mixture of Raw Umber and silver.

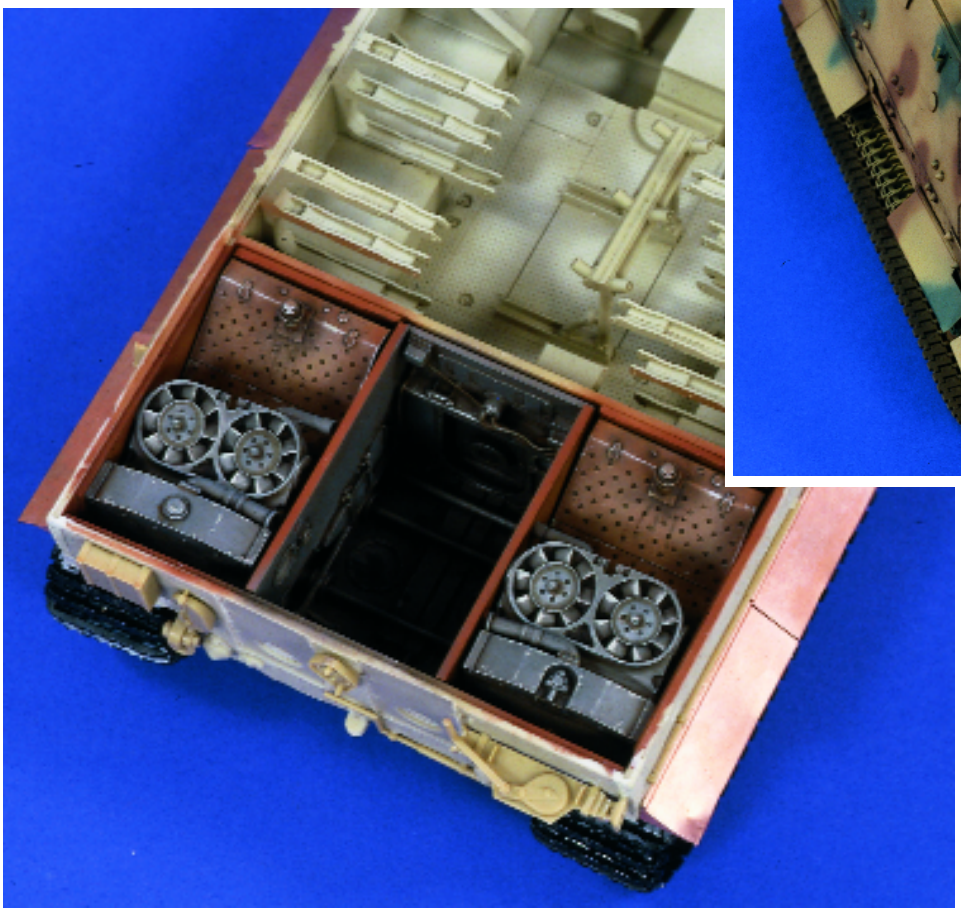
The fighting compartment and the breech-end of the mortar are air-brushed first in Matt 64 Medium Gray, then partly over sprayed with Matt 34 White. The floor of the engine compartment is painted Matt 67 Tank Gray. The fuel tank and radiator compartments to each side of the engine compartment are painted dark red brown to replicate the red-oxide primer used by the German factories. You get this by mixing Matt 60 Scarlet plus Matt Black 33 plus Matt 29 Earth.



The same process described previously is applied to the engine compartment to weather it. The upper fighting compartment is painted in two stages with light gray, then white – the same as described for the lower fighting compartment.

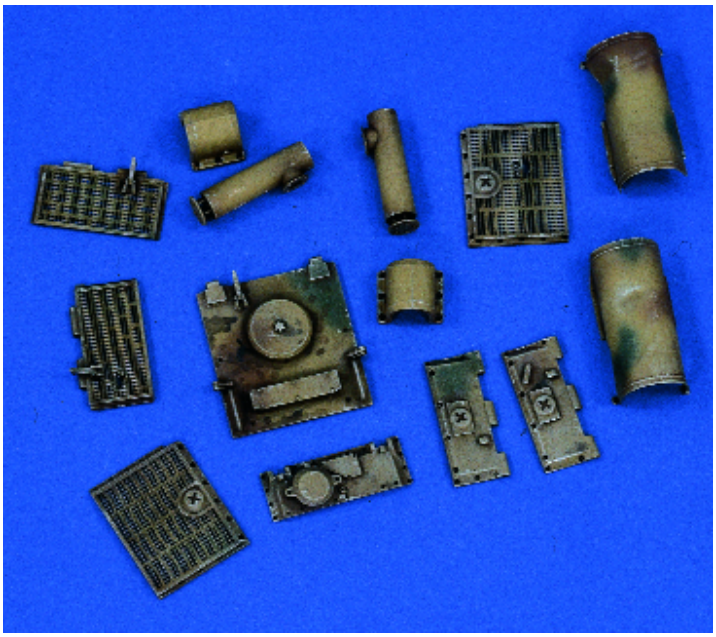
Right :
The assembled model is airbrushed with a standard three-color camouflage scheme. The base coat over the whole model is Matt 29 Earth. The upper hull receives a coat of Matt 94 Brown Yellow, then patches of Matt 160 German Red-Brown and Matt 149 Dark Green. After about 24 hours of drying, seal the whole with a matt varnish.





Below :
An overall wash of thinned Burnt Umber and Matt 33 Flat Black has been applied. Allowed to dry for at least 6 hours, the wash is followed by drybrushing each color with lighter shades of the three base colors.

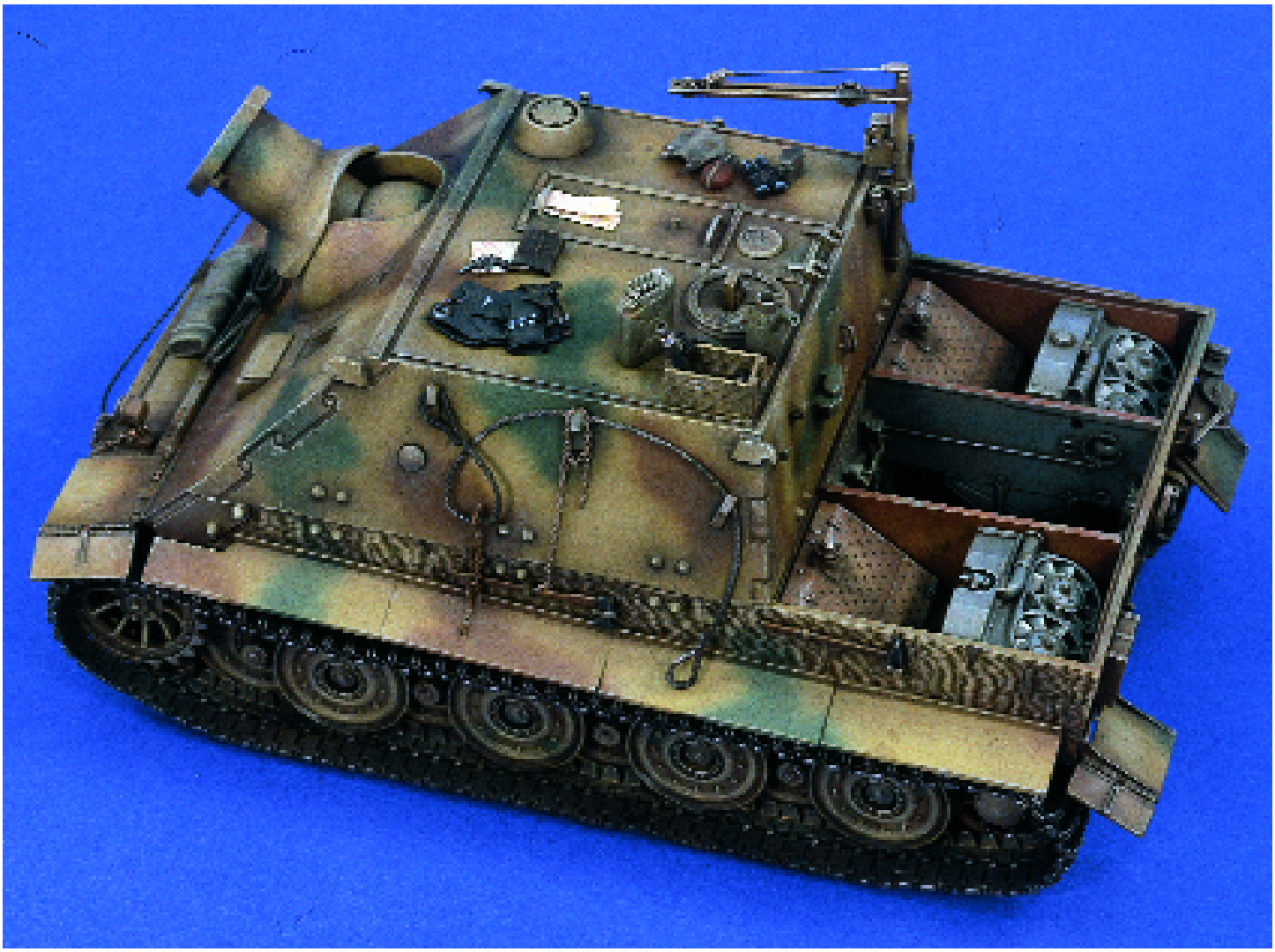
Above :
The finished open rear compartment. Note the heavy weathering inside the engine compartment. Many large oil stains are applied with Matt Black, Raw Umber and Burnt Sienna oil paints to simulate spilled and leaked oil and other engine fluids. The many layers of color attest to the many layers of washes and drybrushing.

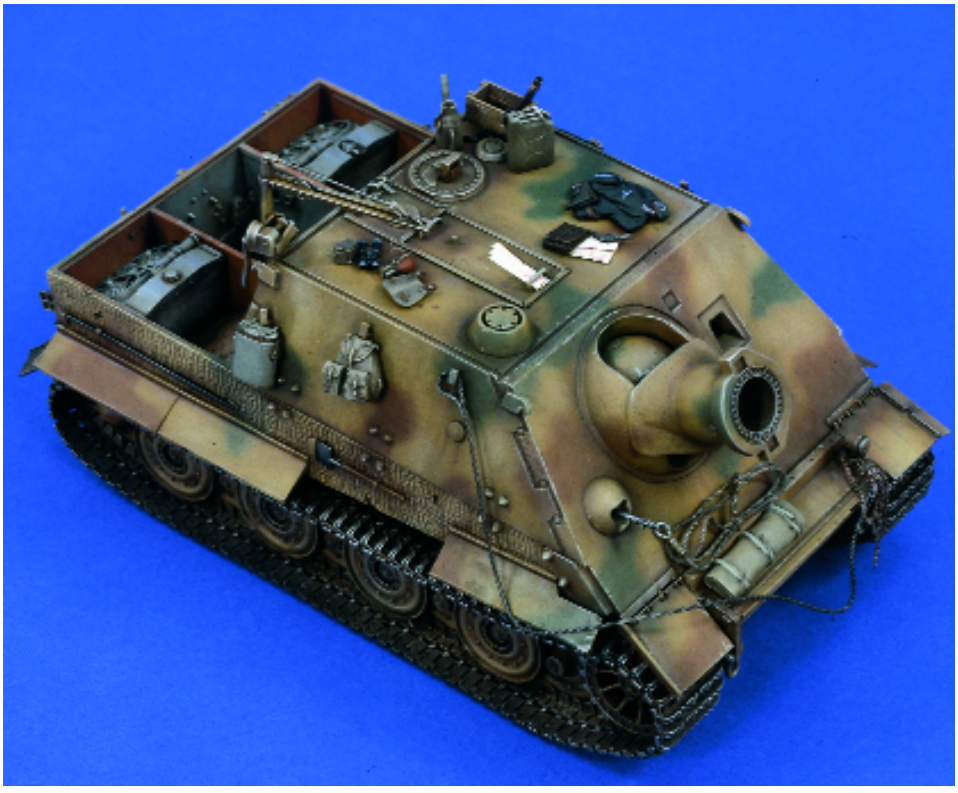


All the rear deck and exhaust system parts have been painted, sealed, drybrushed, and weathered. This Sturmtiger must have been high maintenance – note the many fuel and oil stains on the engine compartment hatch.

The crew has left some equipment on top of the fighting compartment: tanker's jacket, map case, jerry can, binoculars, canteen, etc. These items give a human touch to the vehicle or scene. These particular accessories are from various Verlinden Productions accessory sets, for example: VP 1396, German Clothing; VP 1312, German Soldiers' Equipment; and VP 1204, German Food Supplies.

The various pieces of soldier equipment also help to break up a large area with few details and, at the same time, add some color. Note the effects of adding the metalizing touches with Raw Umber plus silver to the gaping muzzle of the mortar.



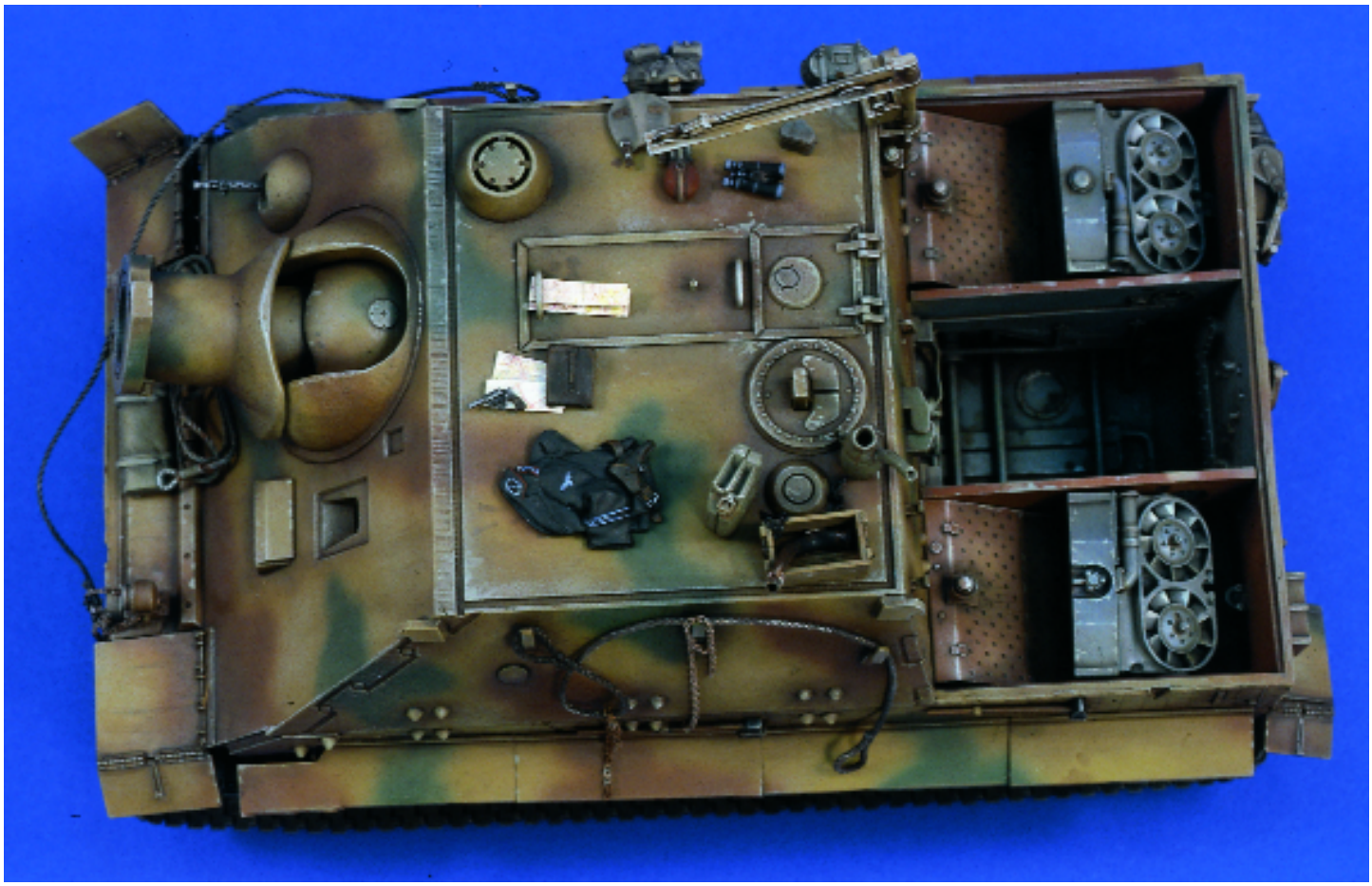


Above : The left side with its rusted chains, slightly bent fenders, and tow cable. The running gear is more brown than the upper part of the vehicle, yet there is some hint of the red-brown and green camouflage colors on the road wheels. Tow cables are made from various thickness of nylon cord "painted" with white glue, then let dry. Later, they are painted a black-brown color, then drybrushed with the metal mixture.

Left : The canvas pack, tow cables and tow chains add further details. These are found in VP accessory sets #619 and #620, but you can come up with your own details, too.

The front end is certainly impressive, though the mortar was for indirect fire. Note the little touches that really make a difference, like the careful application of the various dirt and rust tones on the track blocks, the folded mud guard and chipped zimmerit.

Below :
The right side shows the effects of the metalizing treatment on the tracks and the sprocket teeth where they contact the track. The detail of the zimmerit is brought out through the wash/drybrush technique. The suspension was drybrushed with Matt 94 Yellow-Brown plus Matt 29 Earth. Finally, it received a drybrush pass with Matt 94 plus Matt 34 White. Compare this with photos of the real thing!



The washes and drybrush passes tone down the brightness of the paint to give the impression of a finish weathered by the elements.

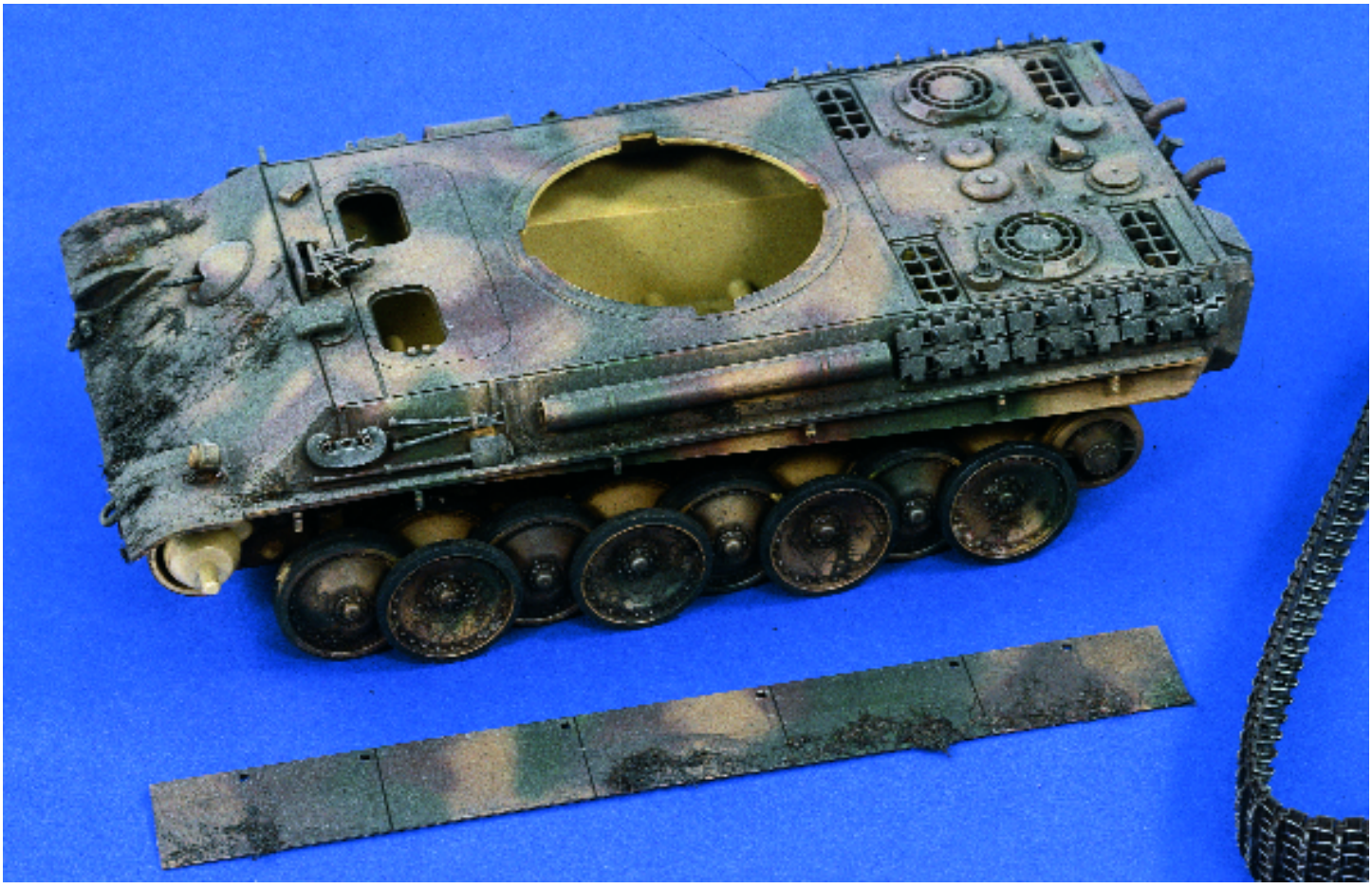
HOW TO BLEND THE VEHICLE WITH ITS TERRAIN by VP Studios

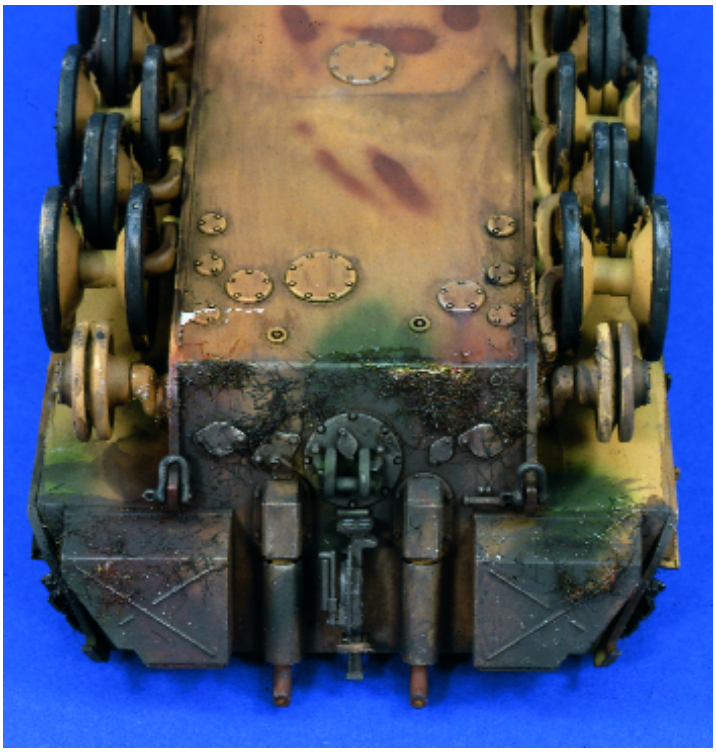
Tanks and other vehicles in the field are like a magnet for dirt, mud, branches, leaves, grass, and so on. Mud, in particular, can be a problem because it gets in among, behind, and between the road wheels and suspension components and can actually immobilize a tank if left to freeze or harden. (That's why tankers the world over will tell you about the hours and hours spent on the wash rack upon return from the field.)

Some of these effects are difficult to achieve in scale, but modelers and diorama builders can add to the weathering process and help the model blend in with the terrain of the diorama by applying small amounts of "nature" to the model.

The model is airbrushed, given a dark wash, and dry brushed in the usual fashion. Cell U Clay, static grass and/or fine sand is mixed with a little water and diluted white glue to create a mixture. Use more or less static grass and/or sand, depending on the nature of the terrain in your diorama.

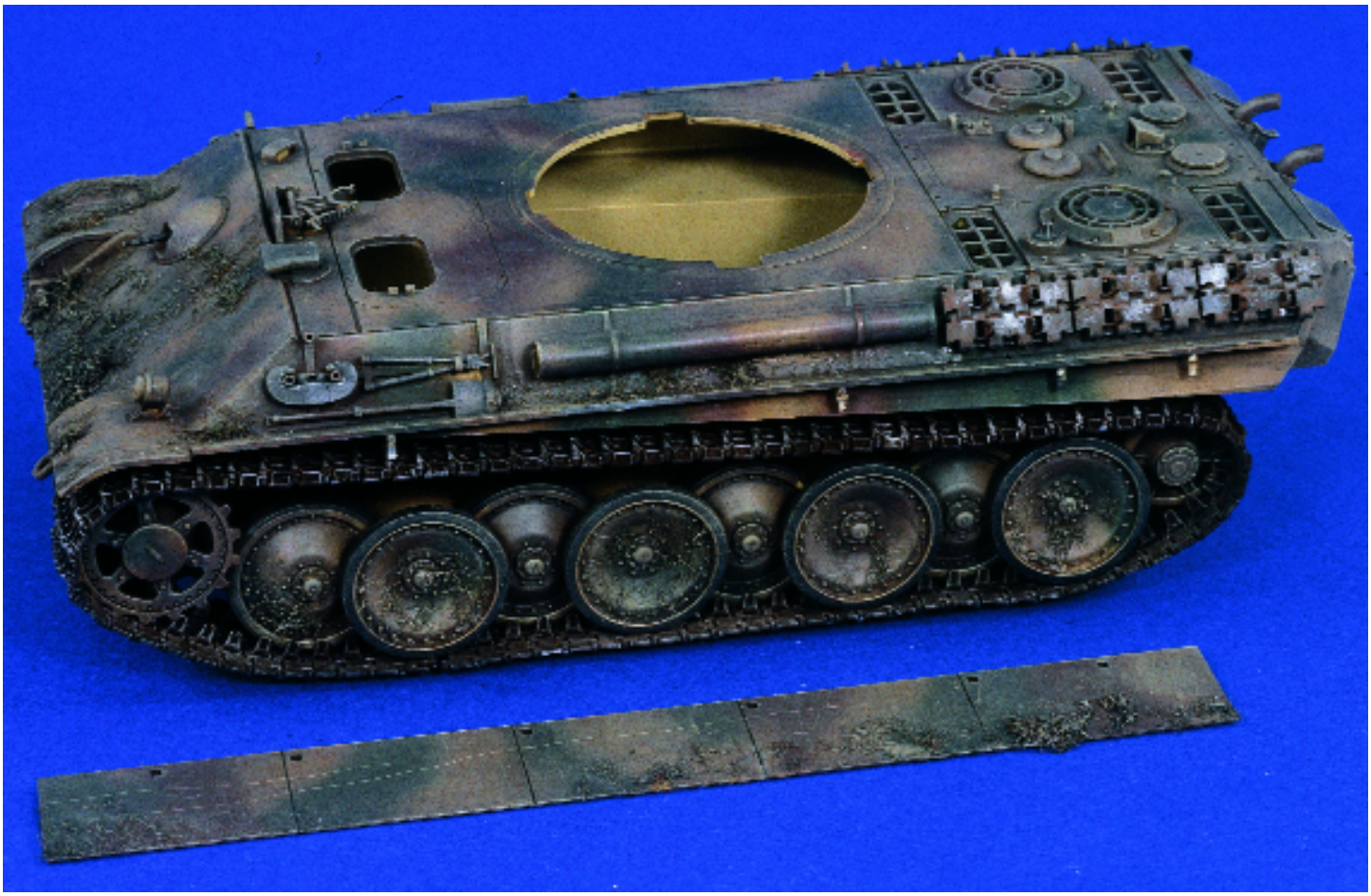
The mixture is applied with a small spatula or similar tool. Start with a little and build up, rather than starting with a lot. You do not want to overdo it or have to try to remove some. Here, we have applied the mixture to the road wheels, front slope, hull sides and side skirts.





Don't forget the lower parts of the hull, particularly where grease might attract more dust, dirt and grit, and where the tracks will throw the stuff against the hull.

After letting the mixture dry, apply a dark earth wash (Humbrol Matt 29 plus Matt 33 Black) to each area where you have applied the earth mixture to the vehicle. Make sure your wash closely approximates the tone of the earth the vehicle has operated in: dark brown, black, reddish brown, etc.



Once the wash has dried, for at least 24 hours, dry brush the spots of earth with lighter and lighter passes. Start with Humbrol Matt 29 Dark Earth, then add some white, then perhaps a final dry brush with Matt 72 Khaki Drill.

The finished process. The effects of the dry brushing are evident in this view.

The upper surfaces tend to be more free of debris because the crews will try not to track mud into the turret, and they have to keep the access hatches accessible and room for the turret to traverse. The whole effect of blending vehicle with terrain is created with a few extra steps and a little more time, but it can make the difference in making the vehicle blend in with its surroundings.

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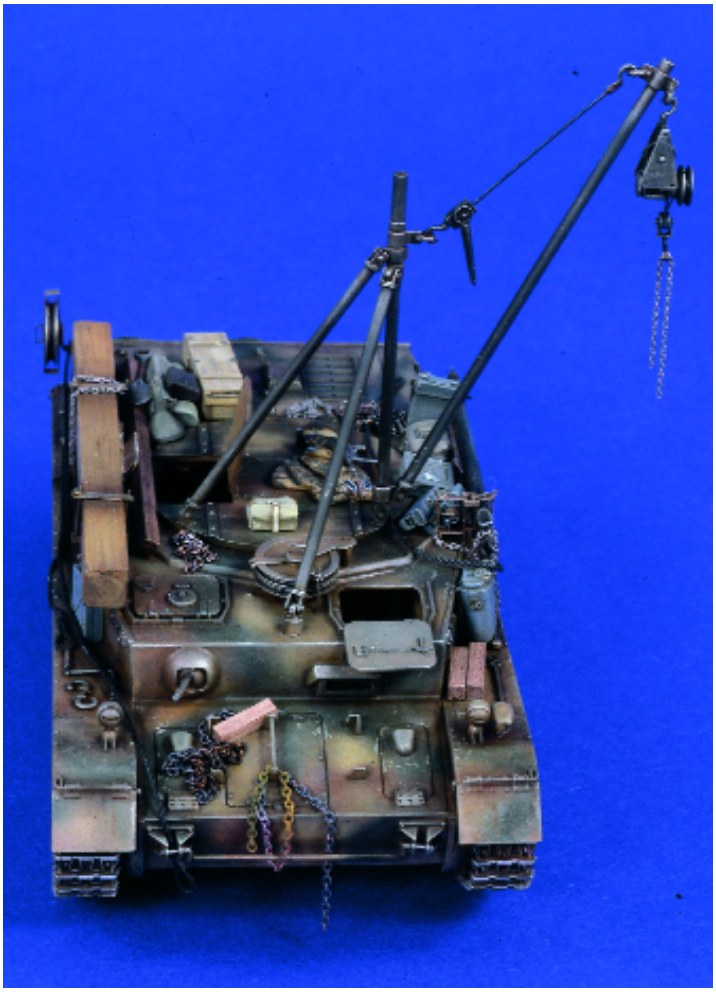
306

Bergepanzer IV

by VP Studios

Excuse me sir, would the gentleman like to see something in a Bergepanzer? Take an Italeri Panzer IV and try this conversion on for size.

The best tank recovery vehicle is, of course, another tank. But a custom designed tank recovery vehicle has special on-board equipment and tools to take care of most field problems close to the front, so that the tank can return quickly to the fight. By having a recovery vehicle share the same hull and power train as the tank units it serves, in a pinch parts could even be taken from the recovery vehicle in order to get a combat vehicle operational.



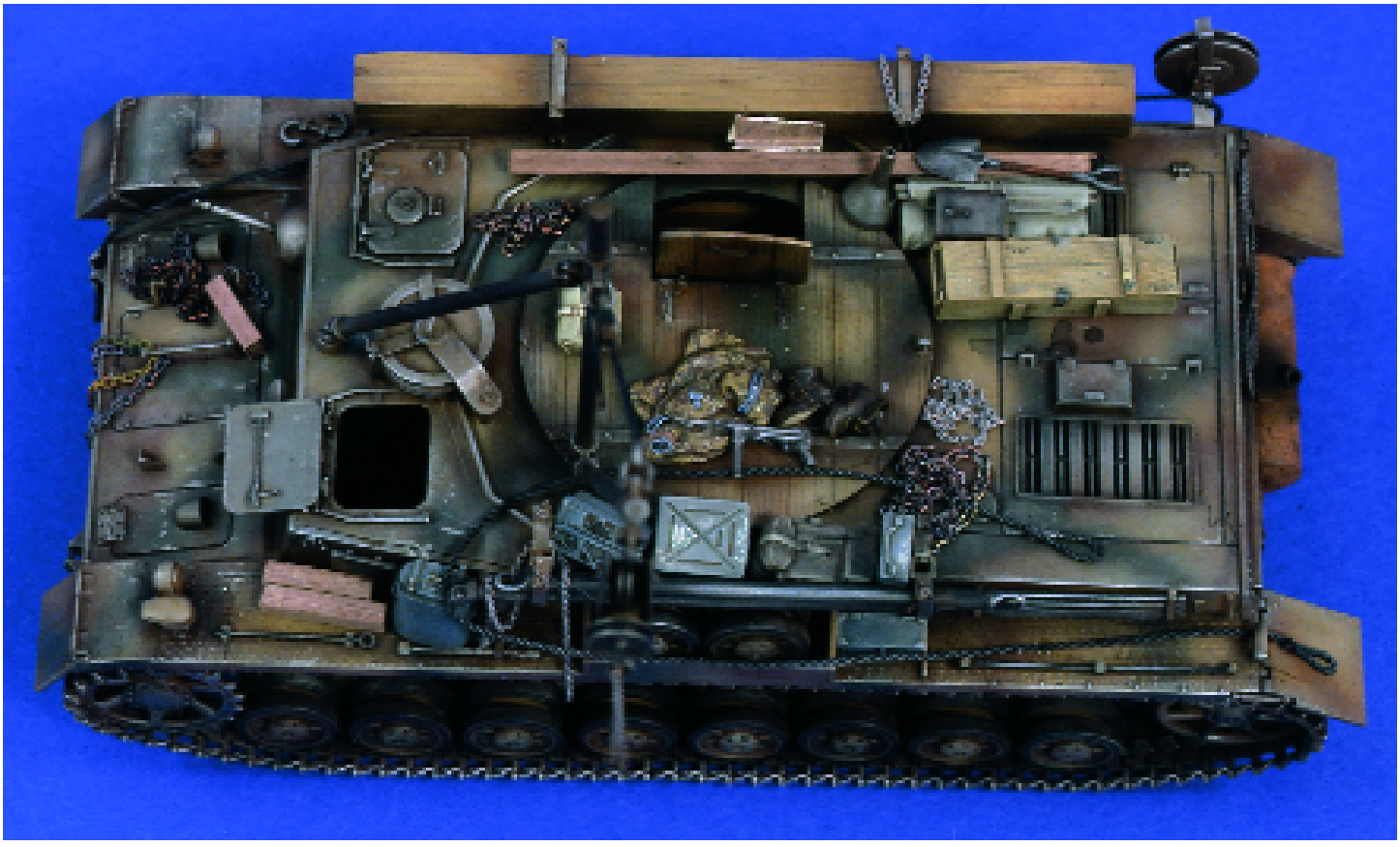
Starting in October 1944, older Panzer IV chassis were converted to the recovery vehicle version, called Bergepanzer. There were other versions based on the Panther and Tiger tanks as well. Instead of the turret, a large wooden cover was fitted to the top of the fighting compartment, and specialized equipment added. In this case, a small crane was added to the top of the hull for lifting heavy objects such as rear deck sections and engines. About 36 Panzer IVs were converted between October and December 1944.

Verlinden Productions Panzer IV Bergepanzer Conversion set (VP 0927) includes everything you need to convert an Italeri Panzer IV to a Bergepanzer. Though designed for the Italeri kit, the nifty conversion set will work on other Panzer IVs, as well.

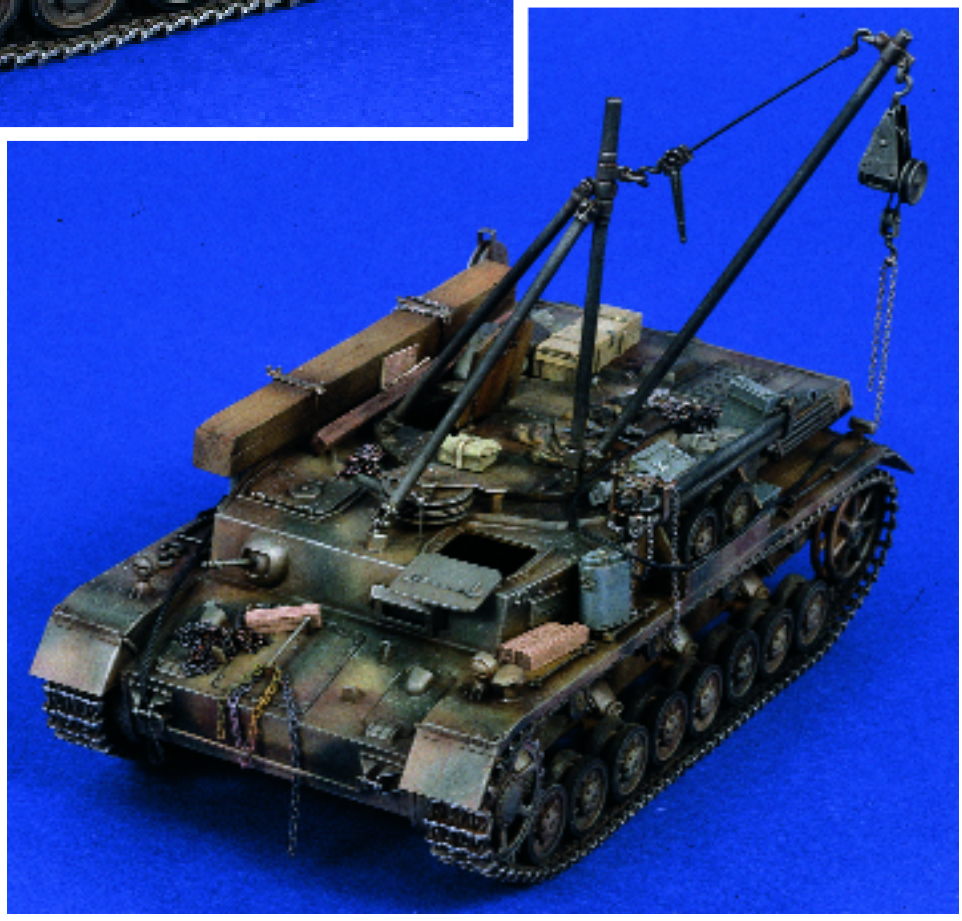
The kit has 34 resin parts, including the large ditching beam and the circular cover that takes the place of the turret, and 20 photoetched parts. Also included are plastic rod and tube, the ubiquitous copper wire, and a length of chain. An instruction sheet lays out the simple construction.

We paint with Humbrol enamel colors and we started with a base coat of Matt 29 Dark Earth. Next came a cloudy over spray with Matt 94 Brown Yellow to form the basic German dark yellow. A pattern of Matt 160 German Red Brown and Matt 149 Dark Green was sprayed over the base yellow. The whole received a good coat of flat varnish to seal in our paint job.

The next step in the painting process is to lay on a heavy wash of Burnt Sienna oil paint mixed with Matt 33 Black. Then the wash is dabbed off with a clean cloth, leaving color in the recesses and around details. This view shows off the crane used for lifting heavy pieces of equipment.



After the wash is dry, the model gets a drybrush treatment with Matt 29 plus Matt 94 from the road wheels to the top of the deck. Then, a second drybrush treatment is delivered with Matt 94. The green patches get drybrushed with Matt 149 plus yellow; and the red-brown areas get drybrushed with Matt 160 plus Matt 60 Red. Note the way the wash brings out the wood grain detail in the ditching beam.



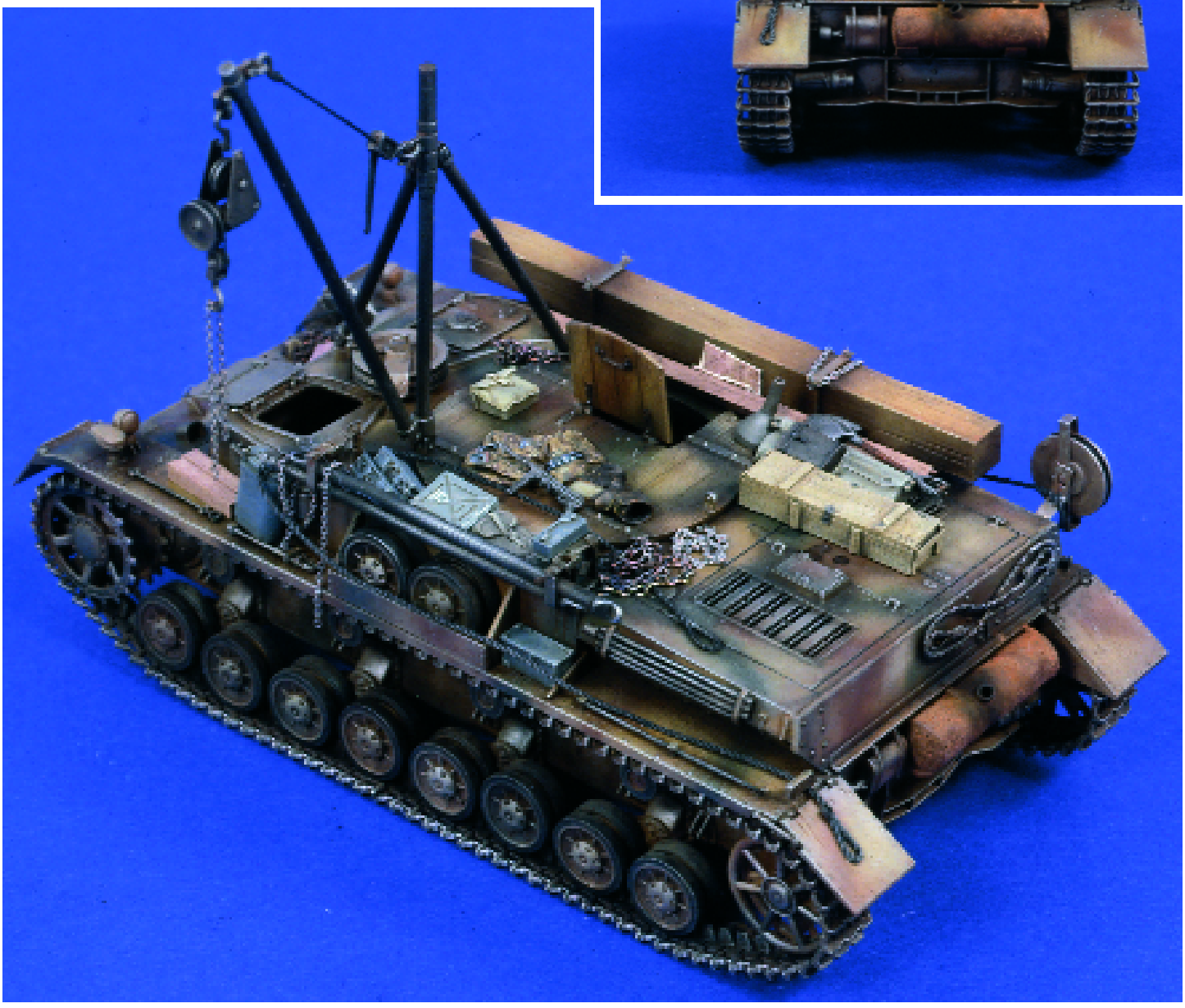
The final highlight drybrush is done with Matt 72 Khaki Drill. Local washes of black, Raw Umber and Burnt Sienna are applied, especially around the engine deck. Matt 62 Leather and Burnt Sienna oils are used for rust streaks, and a metal effect is achieved with a mixture of silver printers ink and Raw Umber applied with a pointed brush.

The extra chains come from VP 619 Small Tow Chain, and VP 620 Large Tow Chain. Here, you can see the three-toned camouflage pattern. Don't you just love to paint all the rubber on Panzer IV road wheels?

Various extra equipment from different sets is added to the fenders and deck. Items include VP 1204 German Food Supplies, and VP 1396, German Clothing.

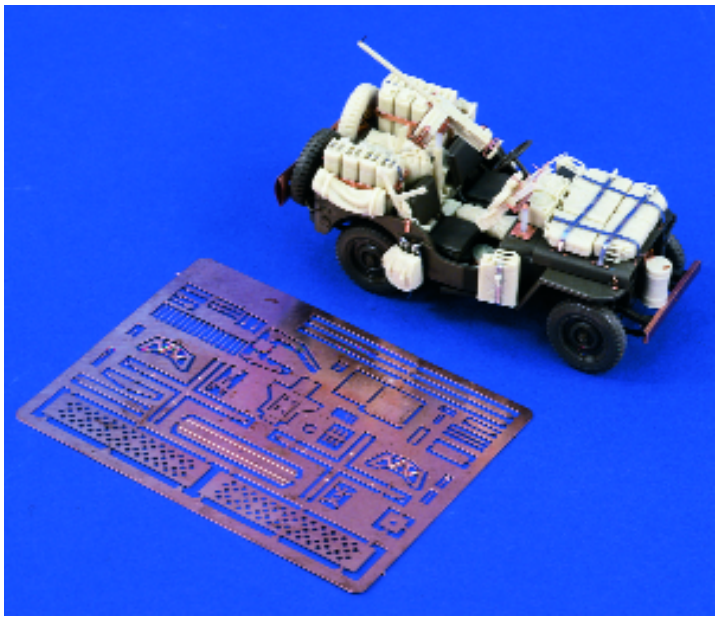
The tracks are painted a mixture of Matt 29 Dark Earth and Matt 33 Black. Later, they are drybrushed with silver printers ink mixed with Raw Umber oil paint to tone down the silver. The beautifully recreated crane is evident here.

Kits Used
Italeri Panzer IV
VP 927 Bergepanzer Conversion set
VP 1204 Food Supplies
VP 619 Small Tow Chain
VP 620 Heavy Tow Chain
VP1396 German Clothing

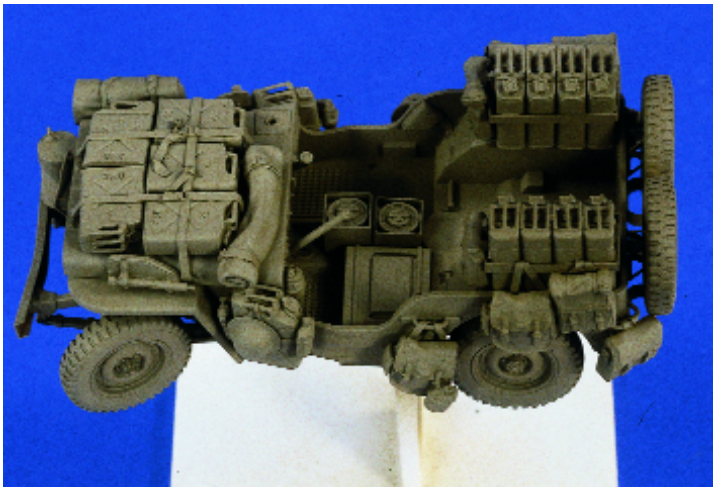


S.A.S. Jeep

By VP Studio's



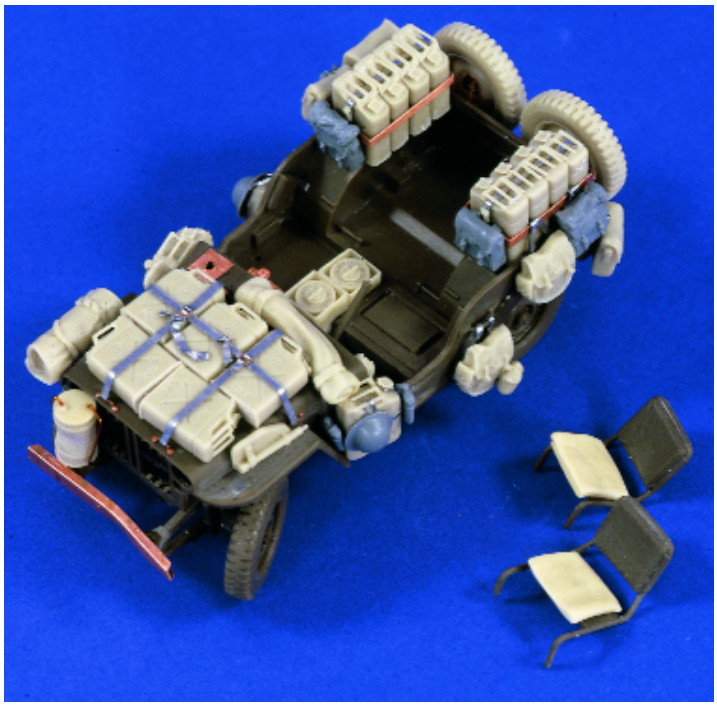
The Verlinden Productions release #1434 consists of 123 resin parts, a photoetched fret containing another 94 parts, plastic rod, and copper wire – everything you need to convert Tamiya's Willys jeep into an SAS version.



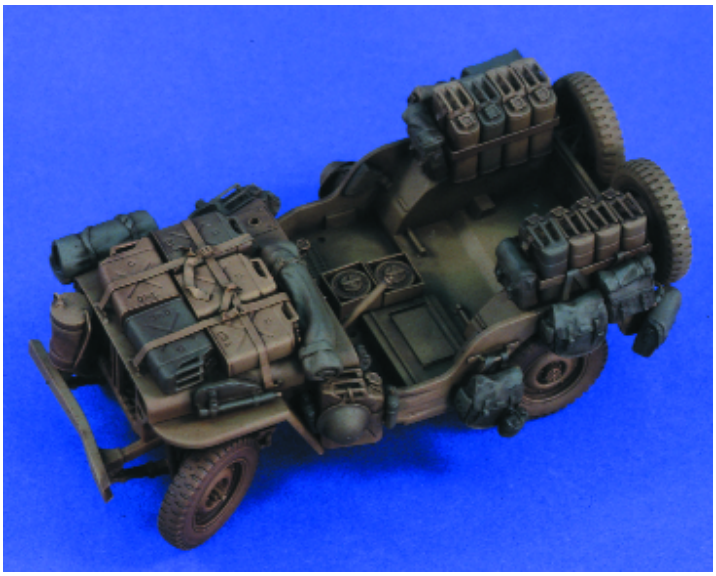
Above :
The base coat of Humbrol Matt 29 Earth has been applied with an airbrush. It was followed by another light airbrushed coat of Humbrol Matt 84 Mid Stone. Once this had dried for several hours, a coat of flat household varnish was airbrushed on.

Right :
To break up the monotone nature of the subject, a few jerry cans, rucksacks, pouches and other equipment was brush painted with Humbrol Matt 66 Olive Drab. Equipment was made by different contractors, so the colors of web gear, clothing, and metallic objects varied significantly sometimes. We do not want our jeep to appear to be all one color.

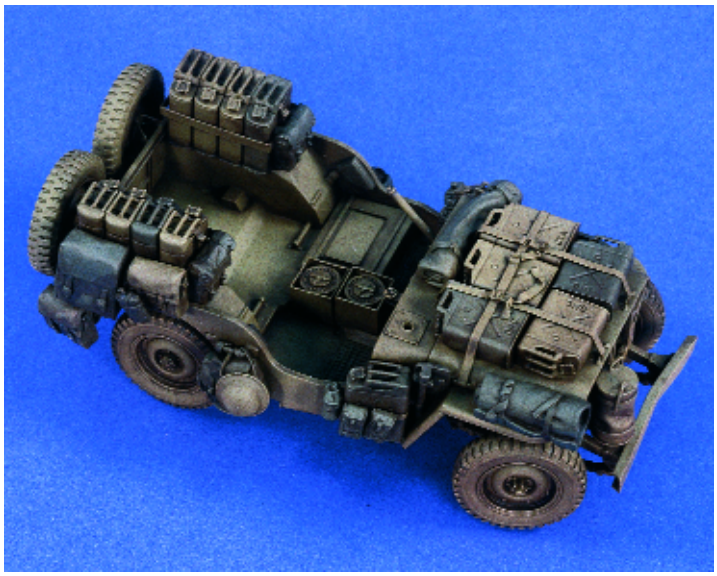
Among today's elite special forces, the British Special Air Service (SAS) got its birth in 1941 in the Western Desert. Founded by David Stirling, this group of famous raiders operated deep behind German lines, disrupting lines of communication and supply. Parachute qualified in case they had to drop in, they moved quickly and elusively on modified Willys jeeps. The jeeps were loaded with gasoline, water, weapons and ammunition for long trips and sharp engagements in the desert. The SAS men preferred desert garb rather than traditional uniforms.



The assembled Tamiya jeep with the added photoetched and resin parts from the update kit, which are clearly evident. Straps lashing the fuel cans to the hood (or should we say "bonnet"?) are cut from lead foil. Seats will be painted separately. Note the turning of the front wheels, which imparts action to the vehicle. It takes a little extra effort, but the effect is worth it.



The first wash is applied with a mixture of flat black and some Burnt Sienna oil paint. Cover the entire model, then pick up excess wash with a clean lint-free cloth. Use dry paint brushes in areas hard to reach with a cloth. The dark wash should tone down the whole paint scheme, but gather around details and in crevices.

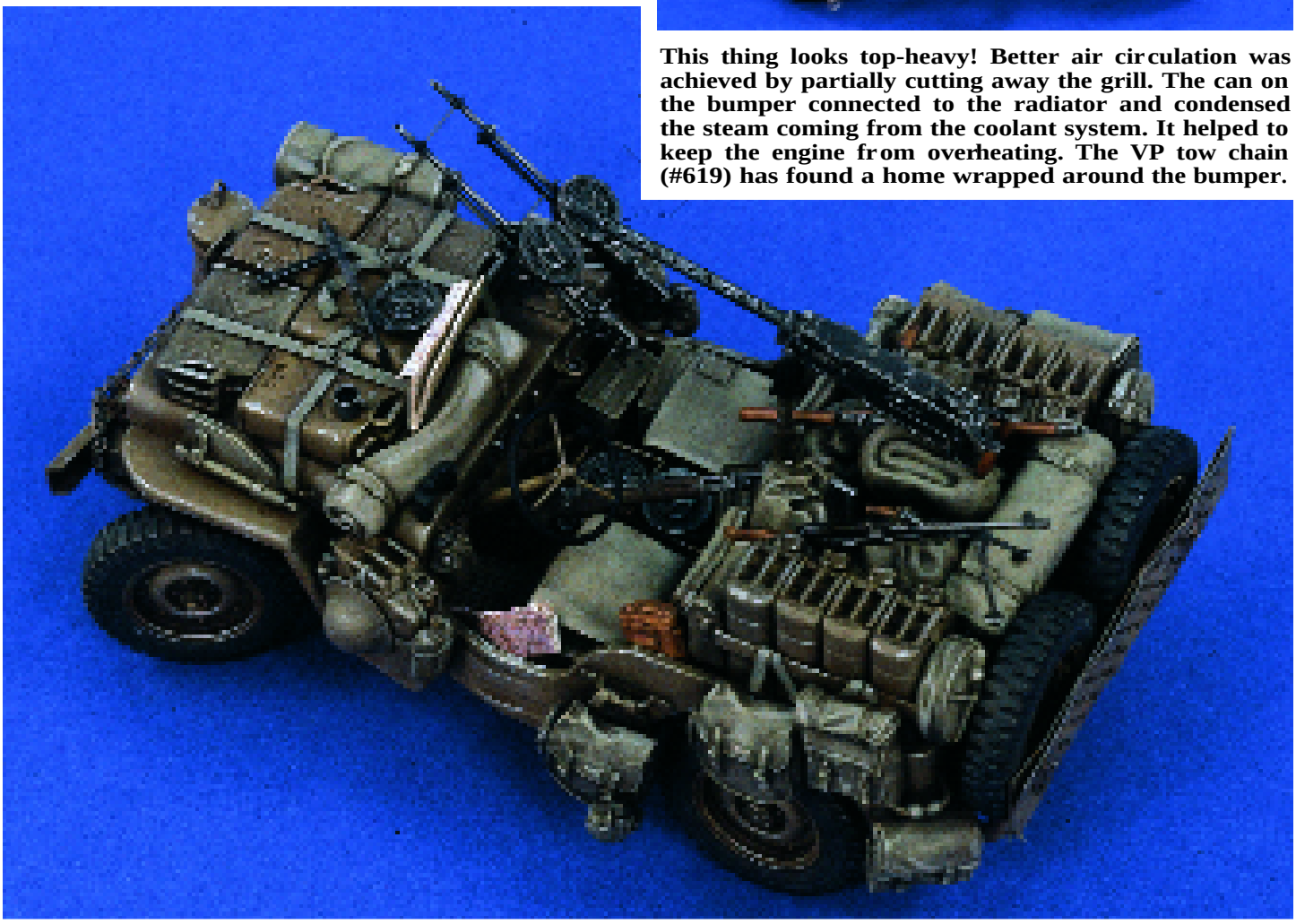


The effect of the first wash is fairly dramatic in this view. Allow the results to dry for at least 24 hours before starting the drybrush process. If you don't, you will muddy the effect of the various colors.

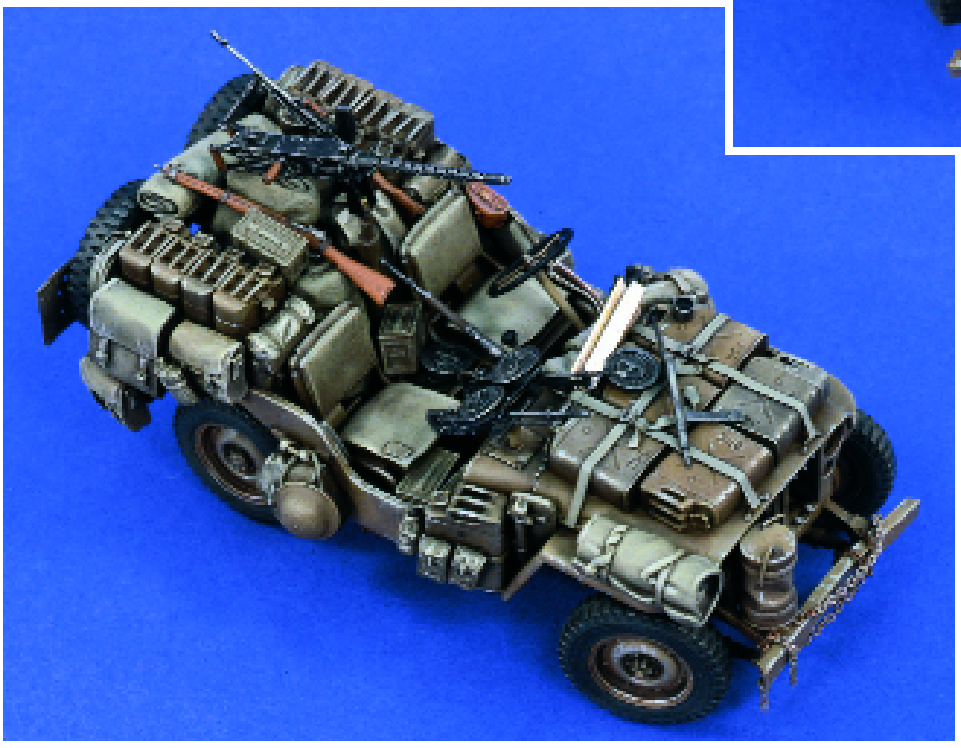
Any rusted areas or rust streaks are represented by Burnt Sienna for established rust, or Humbrol Matt 62 Leather for fresh rust. In the desert, sand and wind can quickly strip paint from a vehicles. Heat exposure also rusts metal. The bare metal effect is created by careful application of Raw Umber or black added to silver printer's ink. The bags, packs and bedrolls are drybrushed Matt 72 Khaki Drill, shaded with Raw Umber, and highlighted with Matt 72 plus white.

The first drybrush treatment is with Humbrol Matt 93, and a second time with Matt 93 plus Matt 72 Khaki Drill. Local washes of Raw Umber and Burnt Sienna oils are applied where needed to provide more contrast or depth.

This thing looks top-heavy! Better air circulation was achieved by partially cutting away the grill. The can on the bumper connected to the radiator and condensed the steam coming from the coolant system. It helped to keep the engine from overheating. The VP tow chain (#619) has found a home wrapped around the bumper.



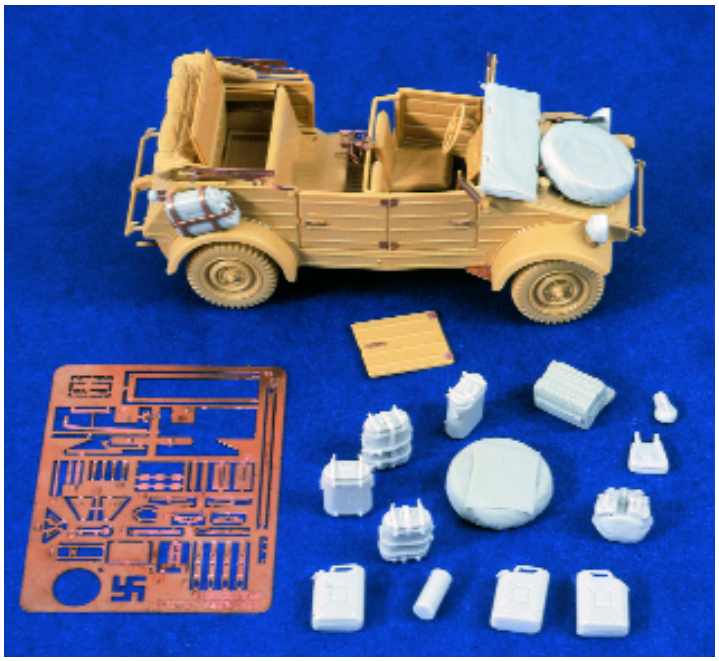
There doesn't appear to be very much room left for anything in this jeep. Extra weapons and gear (Lee Enfield rifle, Bren and Sten Guns, helmets) are from the Tamiya WWII British Infantry set. This baby sports three machine guns – all provided in the update set. Note the VP map stowed close to the driver for easy access.



Two bird's eye views show the stowage of the extra fuel and water cans strapped tightly to the hood. The many pieces of equipment and personal gear have to be painted individually, which allows for easy altering of the colors used. The canvas seats were drybrushed Matt 72 Khaki Drill.

Detailing the Tamiya Kubelwagen

by VP Studios



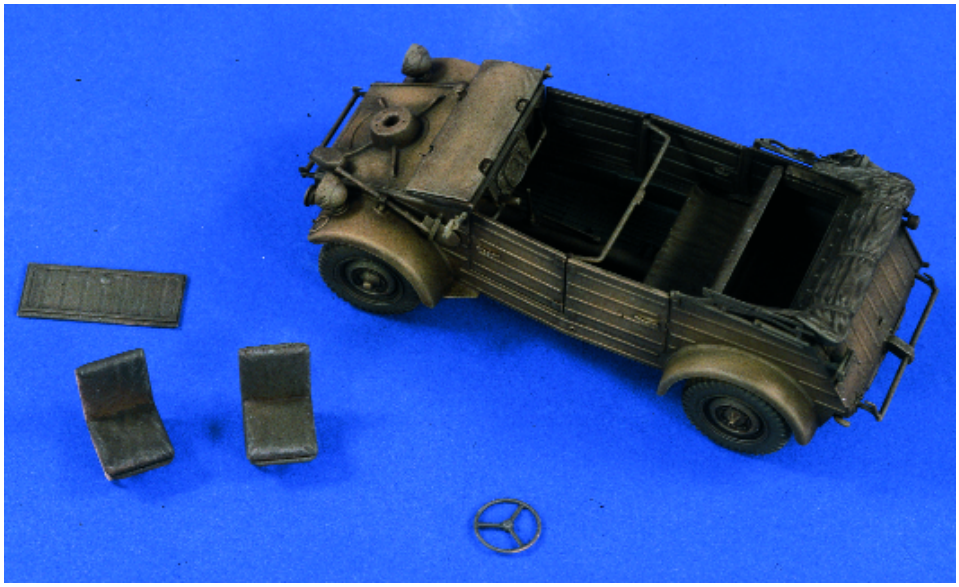
It seems that just about every manufacturer has tried the Kubelwagen in 1/35 scale over the last thirty years. But the Tamiya release of its new Kubel last year set a new Kubel standard for design and detail. Verlinden Production's Kubelwagen Detail Set provides further details and allows the modeler other optional equipment and accessories. Combined with the three-man crew from VP 1381, you have a state-of-the-art model.

The detail set includes 27 resin parts, a 2.5 x 2-inch photoetched fret with more than 30 pieces, and a length of plastic rod. There is some nifty stuff in this set. The resin parts include a choice of two covered spare tires (one with an air identification flag on top), canvas-covered headlights, a canvas-covered windshield, and an accordion. Look closely at the photoetched fret and you will find three stencils for painting the swastika, a circle, and for the loading data stencil on the driver's door.

The left side showing a very lived-in vehicle. It has the look of a vehicle that has seen extensive field use.

We decided to make this Kubelwagen in the standard dark yellow found on most German vehicles after 1943. To get that effect, the model receives a basic coat of Humbrol Matt 29 Dark Earth applied with an airbrush. A cloudy over spray of Humbrol Matt 84 Mid Stone on the large panels gives the first level of color separation. The whole is sprayed with flat varnish and allowed to dry at least 24 hours.

The first wash consists of a mixture of Humbrol Matt 33 Black plus Burnt Sienna oil paint. Don't put it on too thin, you are going to blot it off anyway with a clean rag. Work a small area at a time. Note that some details are painted separately.



The first drybrush run is with Humbrol Matt 83 Desert Yellow. Note how the details are brought out through the application of shadow (washes) and highlights (dry-brushing). The wheel hubs and lower suspension receive a drybrush application of Matt 29 Dark Earth.

The entire model is drybrushed a second time with Humbrol Matt 94 Brown Yellow. Local washes can be applied with Raw Umber and Burnt Sienna oil paints. The optional flag-covered spare tire has been used. The nazi flag has been airbrushed. The stencil for the circle and the swastika are provided in the detail set.

The final drybrush pass is with Humbrol Matt 72 Khaki Drill. The tires are painted Matt 33 Black, then drybrushed Matt 29 Dark Earth. Note the loading data stenciled on the driver's door and the "lucky" horseshoe nailed to the front fender. Both are included in the set.

From the front, the covered headlights, horseshoe and flag are noticeable. The flag adds some needed color to an otherwise drab vehicle.

Accessories from various VP accessory sets are added. Kits used are:
VP 13 Maps
VP 1204 Food Supplies
VP 619 Tow Chains
VP 1312 German WWII Soldiers Equipment
VP1421 MG 34 Machine Gun Set

The system of airbrushing a base color, a highlight color, then alternating washes and drybrushing results in several layers of subtle color that you can actually see. As noted, the chain is a VP accessory.

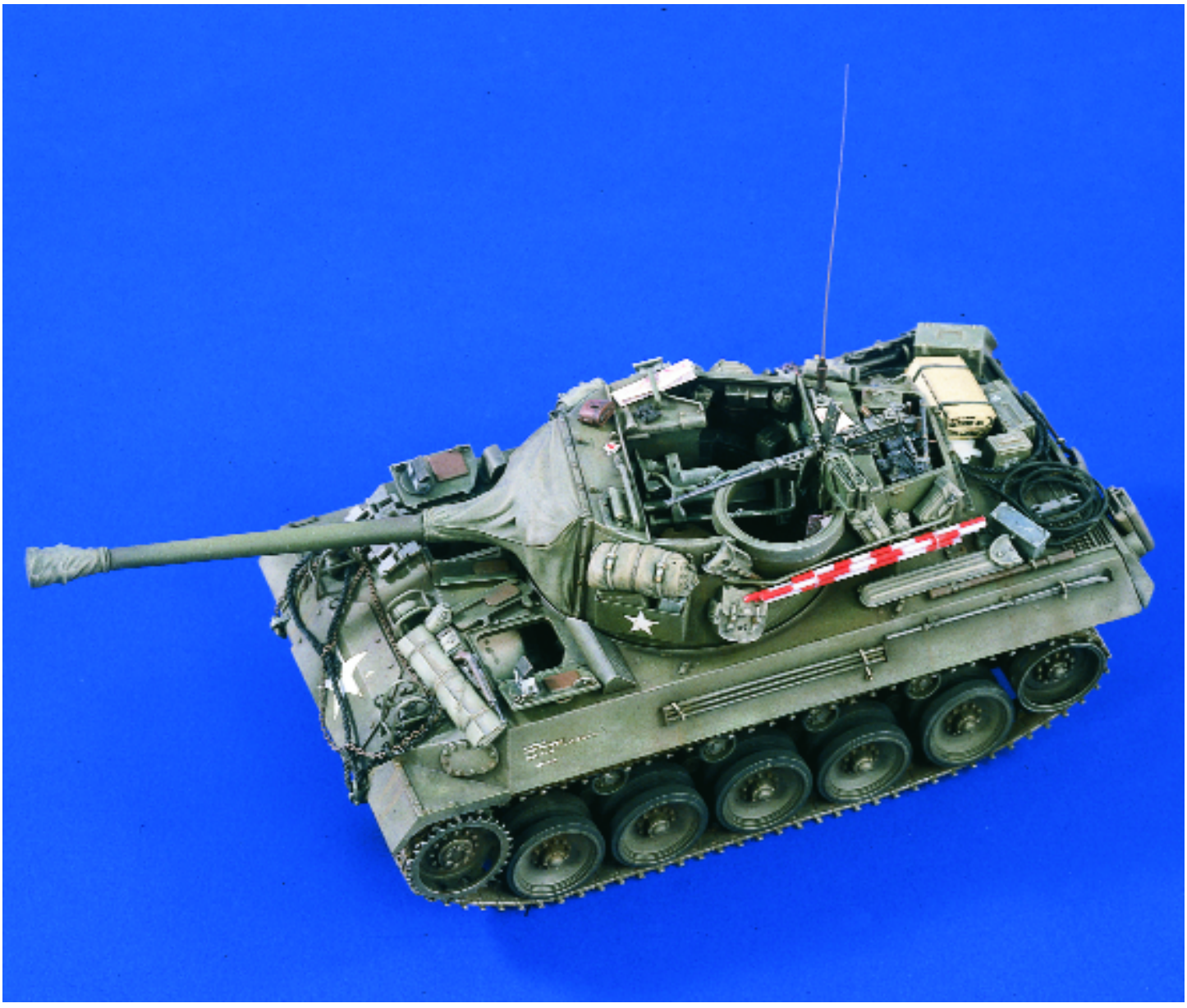
Though a small vehicle in 1/35 scale, it can take a lot of equipment, each piece of which has to be painted separately. Give as much care and use the same system of washes and drybrushing on the equipment as you do on the vehicle itself.

Application of the step-by-step technique, patience and imagination result in a fine model.

DETAILING THE M18 HELLCAT IN & OUT

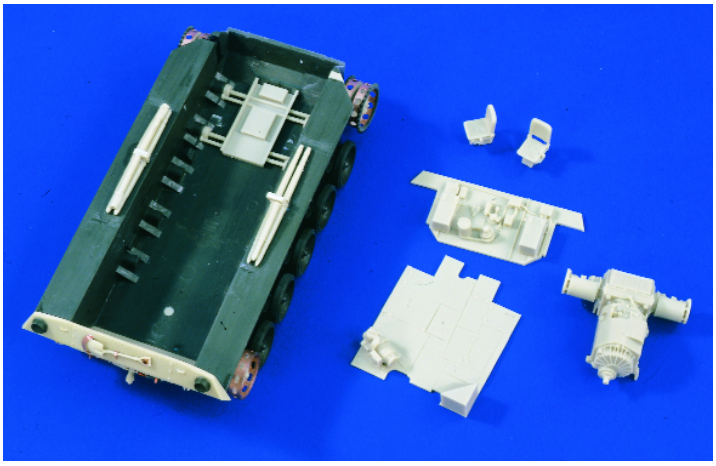
VP Studio's

Produced from July 1943 until October 1944, the M18 "Hellcat" was the first purpose-built tank destroyer, and was one of the better armor designs developed in the U.S. During WWII. The M18 was distinguished for it's high speed (about 50 mph), which made it the fastest AFV in U.S. service during WWII. Another attribute was the powerful main gun armament, which consisted of a 76mm M1A1 gun. This was later replaced by the M1A2 and M1A3 guns, which had fittings for a muzzle brake, the main difference between the two being that the M1A2 had a tighter "twist" to the rifling, providing more accuracy. The combination of high speed and powerful armament made the M18 "Hellcat" a very effective weapon. Although it went into service late in the war, it saw use both in the European theater as well as the Pacific. Had the war continued, there would certainly have been other developments on the theme of the M18.

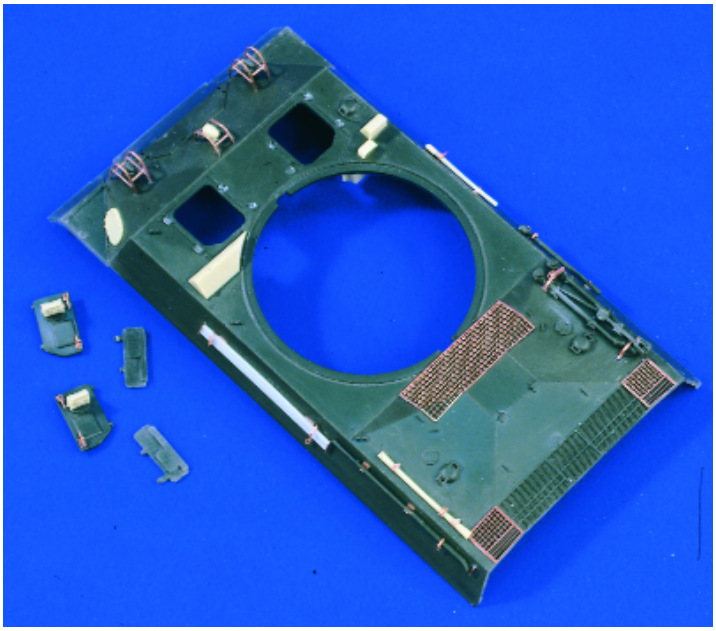


Academy's beautiful kit (No. TA980) of the U.S. Army Gun Motor Carriage M-18 HELLCAT comprises of more than 375 separate injected plastic parts. The road-wheels and sprockets are attached using the familiar poly-cap system, and a choice of separate injected plastic links or the single piece flexible vinyl tracks are included. Extra thread is provided for the tow cable. The basic kit builds-up into a very nice model, but the addition of VP's interior & exterior update sets turns it into a stunning masterpiece!

VP#1512 M18 Hellcat Interior Update includes over 75 resin parts for detailing the driving and fighting compartments, including the transmission, lower hull floor plate, turret ring, gun breech, crew seats, radio set, extra ammo and various other internal stowage.

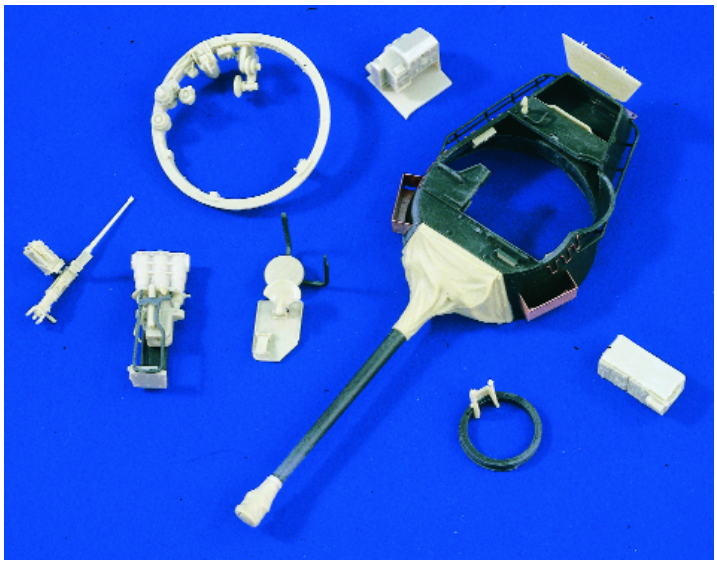


The lower hull subassembly prior to airbrushing. Most of the interior parts are kept separate for easier painting and weathering. Good clean-up of parts and test-fitting before painting is essential in order to ensure a perfect fit on final assembly. Note the new resin rear plate and photo etched parts on the drive-sprocket and tension-idler.

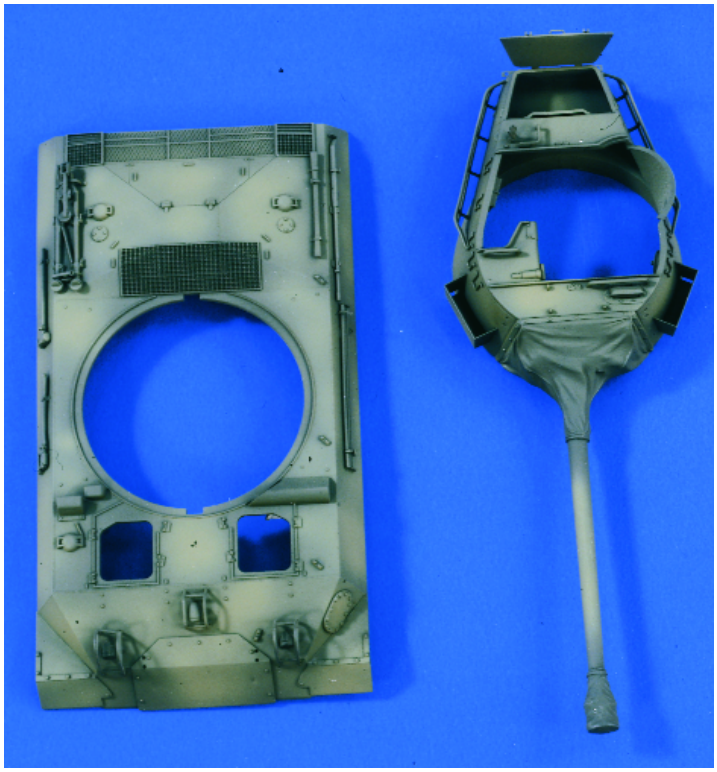


The upper-hull final assembly (before painting) showing the photo etched mesh covers, tool fittings, new brass-wire headlight brush-guards, drivers hatch details, all working together and resulting in a highly detailed model.

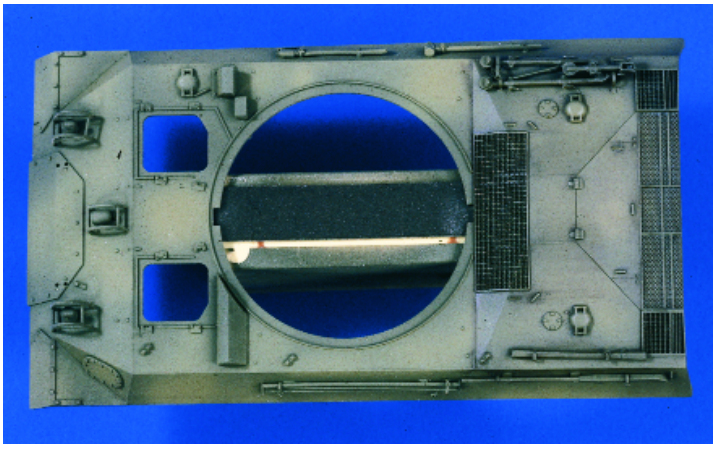
VP#1516 M18 Hellcat Exterior Update contains nearly 50 resin parts and well over 100 photo-etched copper parts to detail the rear hull plate, pioneer tool stowage, cal. .50 MG, turret tool box, gun mantlet and muzzle brake dust covers, drive sprockets, tension idlers, hatches, engine deck grills, etc. Copper wire is included for making various handles and stowage brackets, and a resin jig allows you to make copper-wire headlight brush-guards.



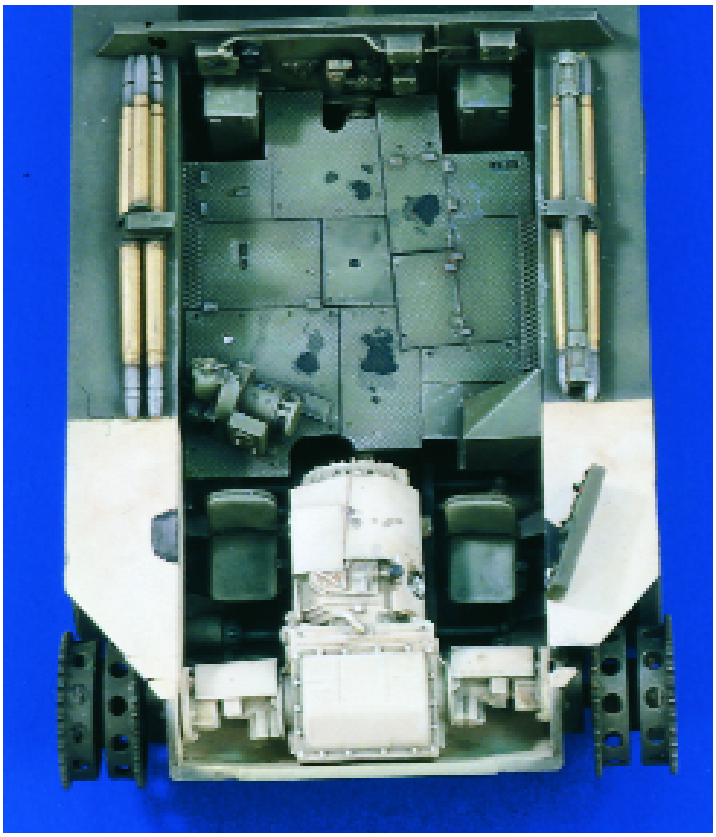
All turret-interior subassemblies lined-up and ready for painting. Careful planning, logical thinking, and proper test-fitting (again & again) make sure that all subassemblies will fit flawlessly upon final assembly after painting and weathering.



First, all parts are airbrushed with a mixture of Humbrol matt 29 Dark Earth + matt 86 Light Olive + matt Black. After drying, a light over-spray of matt 86 Light Olive was airbrushed in a vague cloud-pattern to create the foundation of light & shadow in preparation for the weathering process.

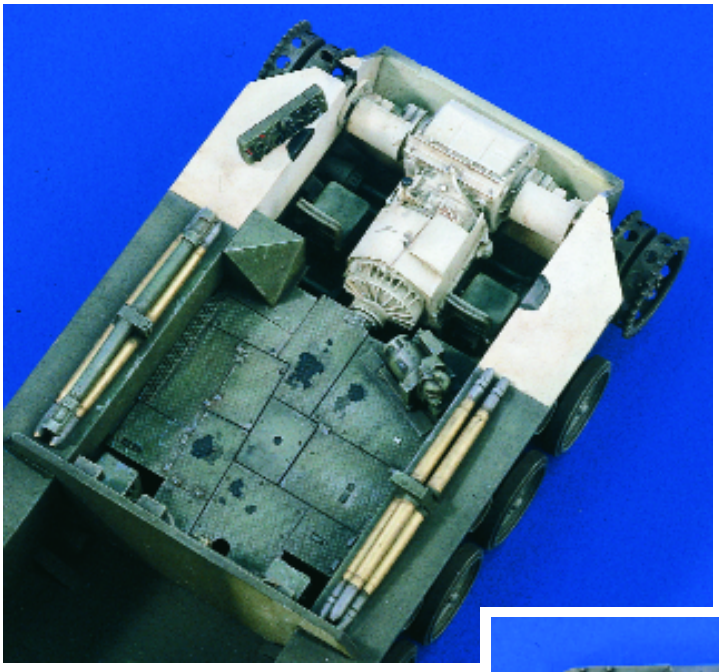


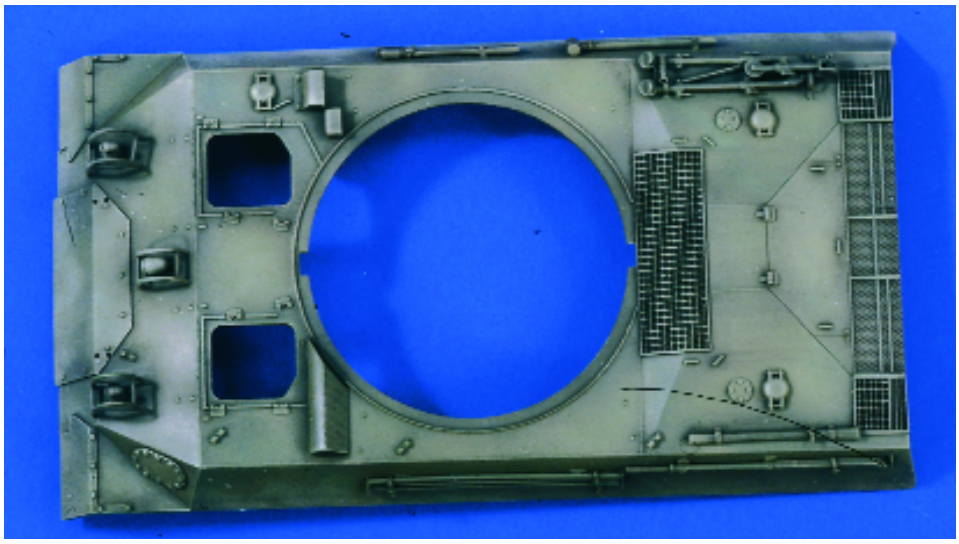
After all basic painting had dried, all subassemblies were sealed with a dead matt household varnish in order to protect the delicate base coat from the violent weathering process. After drying a minimum of 48 hours, the wash was started with a thin mixture of matt Black + Burnt Sienna oils. Note in this picture that only the engine deck has been washed, leaving the forward hull area "clean". This clearly shows the MUST of washing during the weathering process.



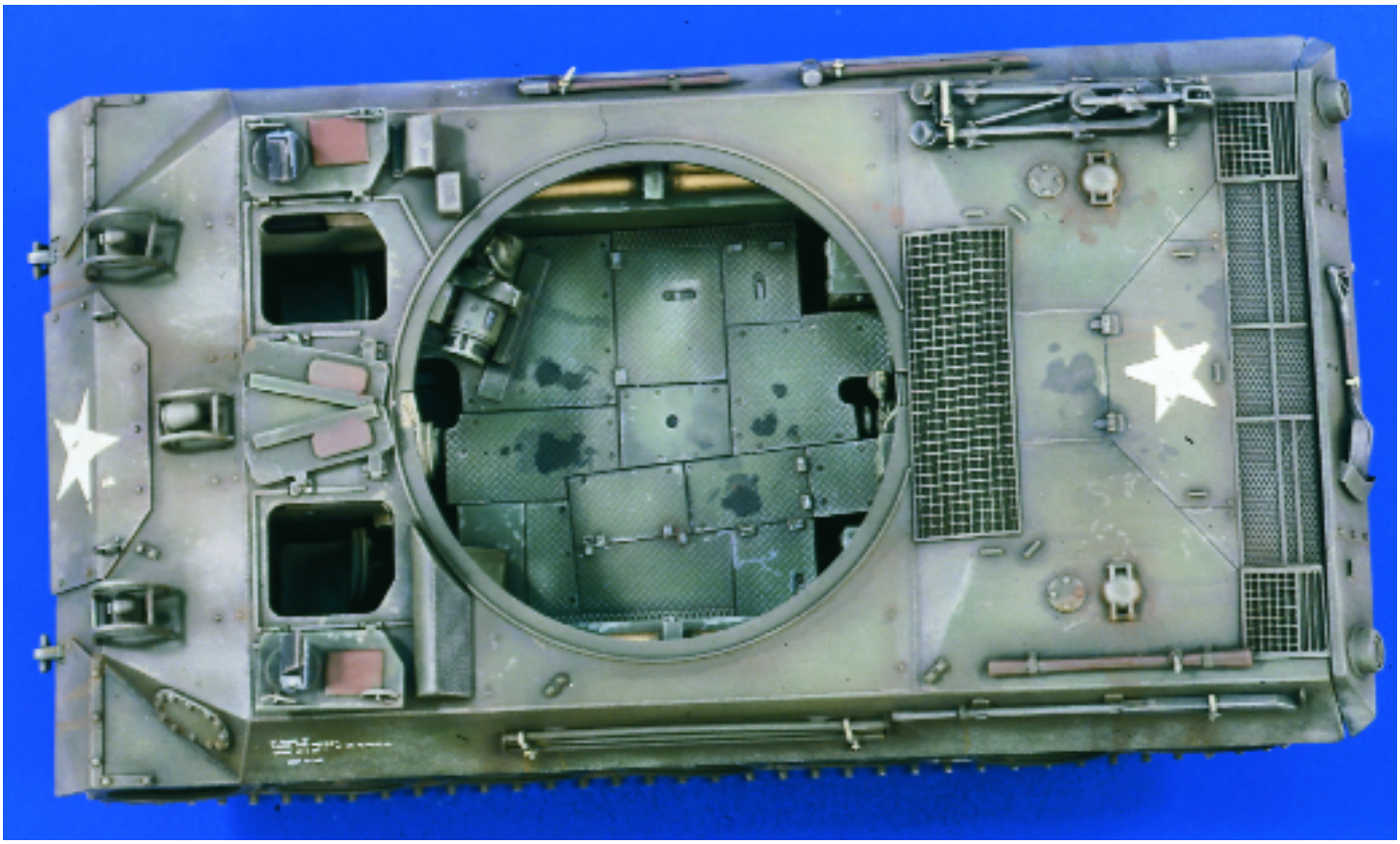
The lower hull with finished interior parts installed. The front hull area with transmission was airbrushed an off-white, masked off before airbrushing the Olive Drab colors. All white parts were washed subtly with Humbrol matt 29 Dark Earth followed by dry-brushing with straight matt White. The shells in the stowage racks were painted a brass color, the warheads matt Black dry-brushed with dark metal.

Another view of the finished lower hull interior clearly shows the heavy weathering with various washes of Raw Umber, Burnt Sienna, and matt Black. Heavy metalizing was done, including the "chipping" of paint on the floor. Note the oil stains. The seat cushions are canvas, so we dry brushed over the base-coat with Humbrol matt 72 Khaki Drill.

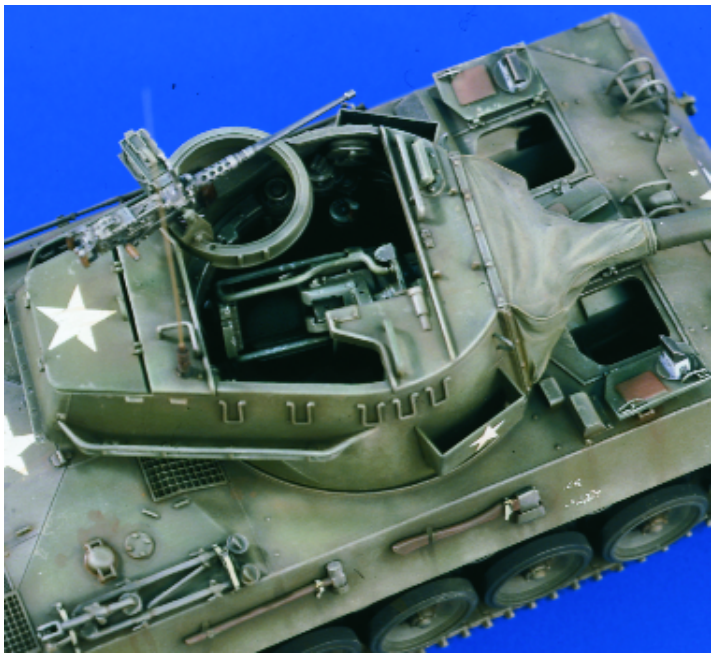




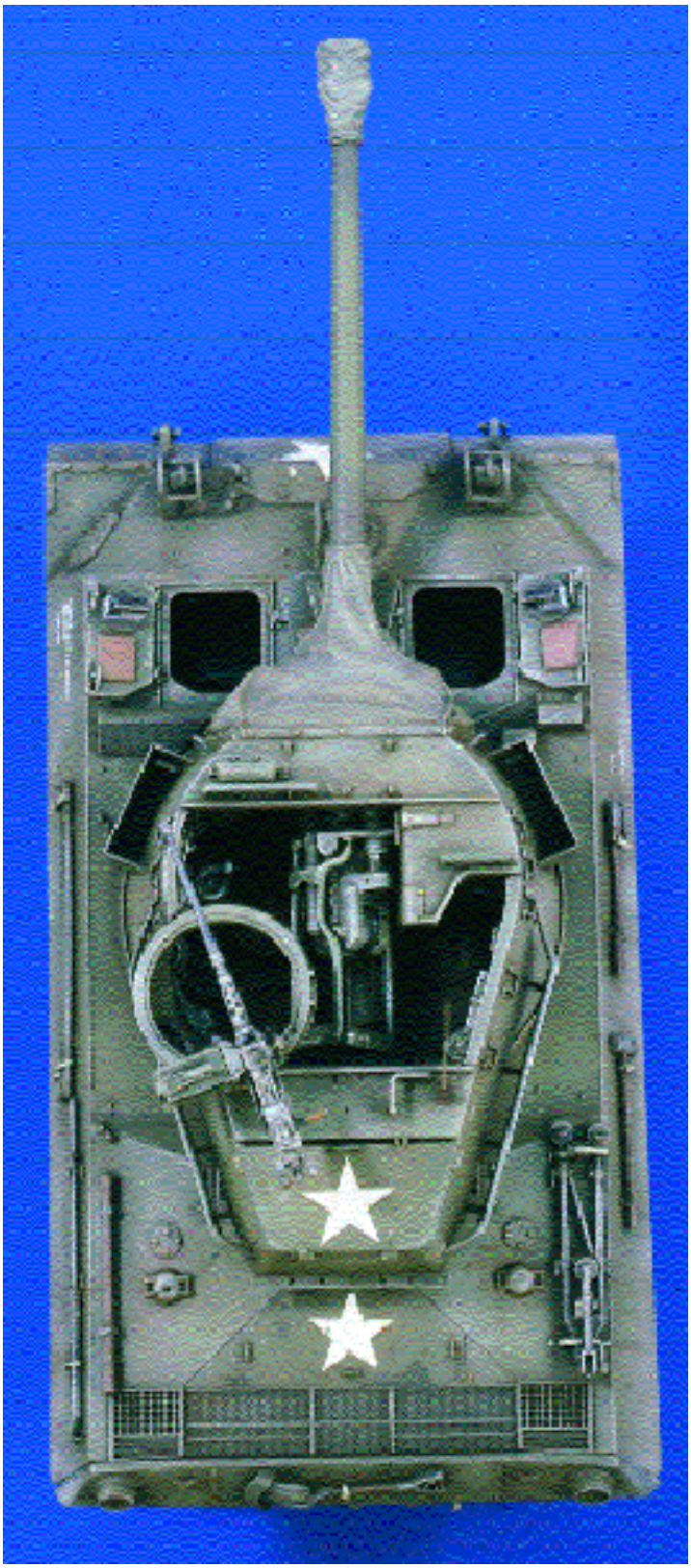
The upper hull after the washing process, and half way through the dry brushing process. The first dry-brushing run was with Humbrol matt 29 Earth, the second matt 86 Light Olive. Only half way through and the effective weathering system already creates a subtle play between highlight and shadow. All of the details are already on the model, but it is an art to bring them to the surface to stand out and be noticed easily by the viewer.



After the upper hull is fitted to the lower hull, the weathering is completed with various dark local washes (Black, Raw Umber, Burnt Sienna, Humbrol Matt 62 Leather) and highlights with Humbrol matt 72 Khaki Drill, matt 86 Light Olive + Yellow dry-brushed subtly. Metalizing is the last task; Raw Umber oils + silver in different mixtures (more or less silver with the Raw Umber creates different shades of bare metal and polishing). Note that armor plate is always welded with stainless steel, which has a high shine, does not rust, and paint does not stick well to it. Again, lots of oil & fuel stains on the engine deck. Note the natural leather pads on the hatches inside, achieved with Burnt Sienna + Yellow.

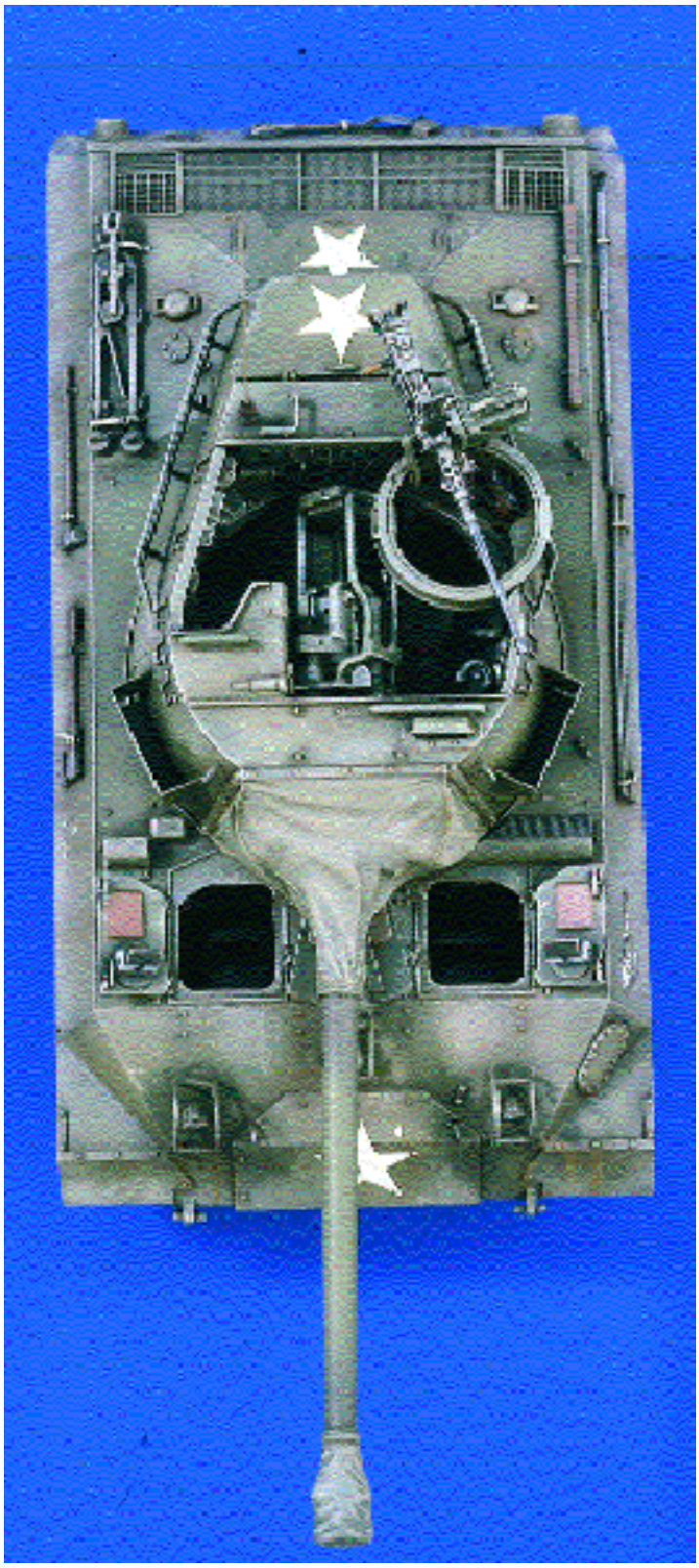


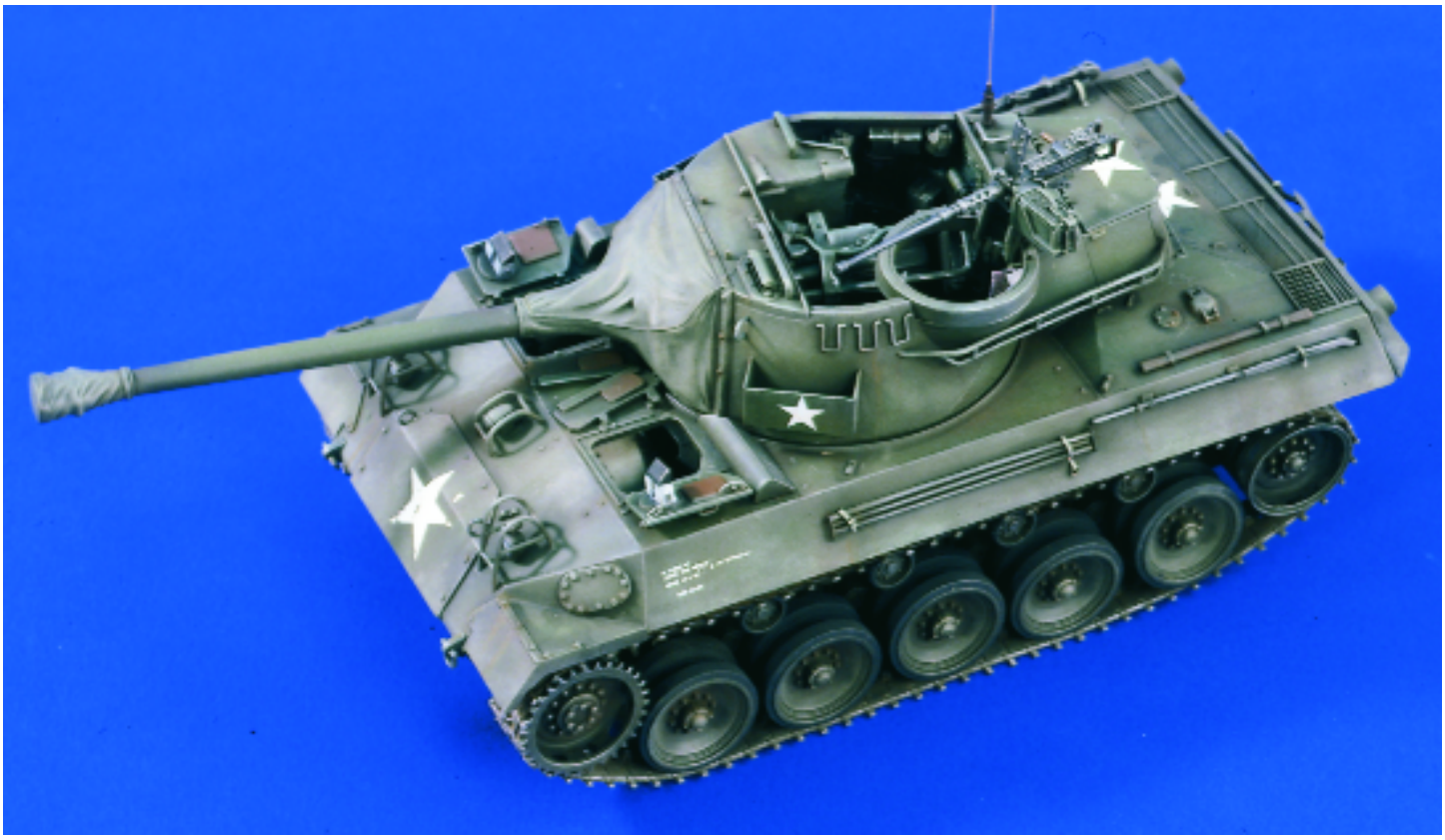
A close-up uf the turret with partial visibility of the inside. The magnificent VP Cal. .50 and the super-detailed radio set enhance this model beautifully. Note the heavy bare metal on the main gun breech and lots of chipped paint on the turret edges.



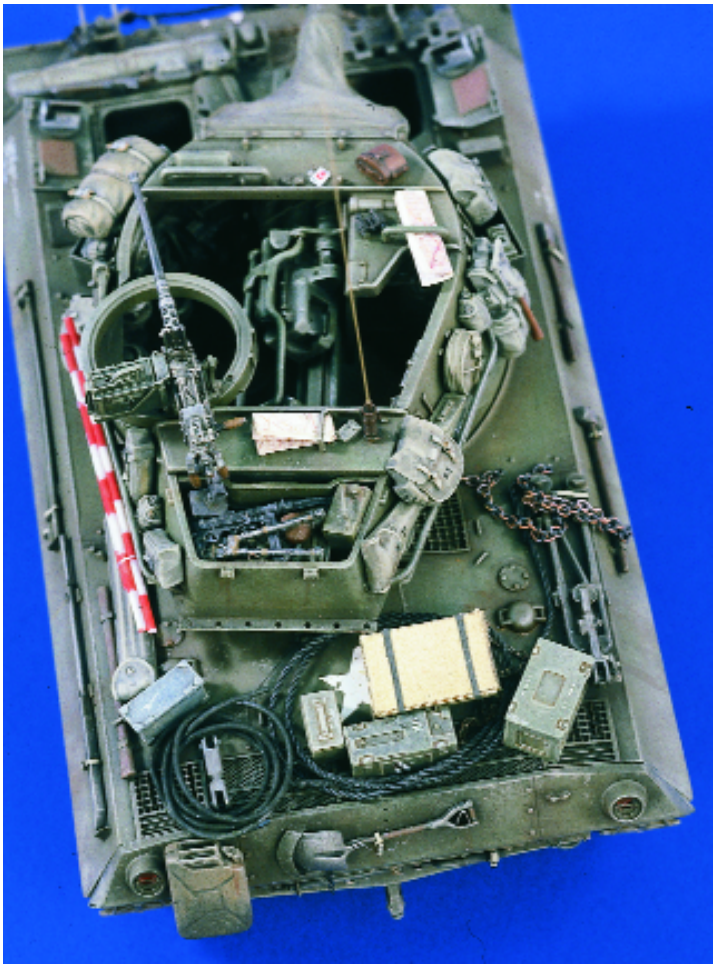
Some important final details : the canvas covers for the gun mantlet and muzzle brake are dry-brushed to a natural canvas color (matt 72 Khaki Drill + White). The canvas straps holding the tools in place are hand painted with the same color. The tracks are painted a rusty shade (Black, Burnt Sienna, and Humbrol matt 62 Leather) and dry-brushed with a metallic mixture. The stars and stencilling are VP dry-transfers weathered with pastel chalks.

Two top views of the completed "Hellcat" showing the subtle play of highlights and shadows with a variety of colors, like Olive Greens, rust, oil & fuel stains, dusty areas, and shades of bare metal. These all work together to turn a model of a war machine into a colorful piece without being unrealistic.



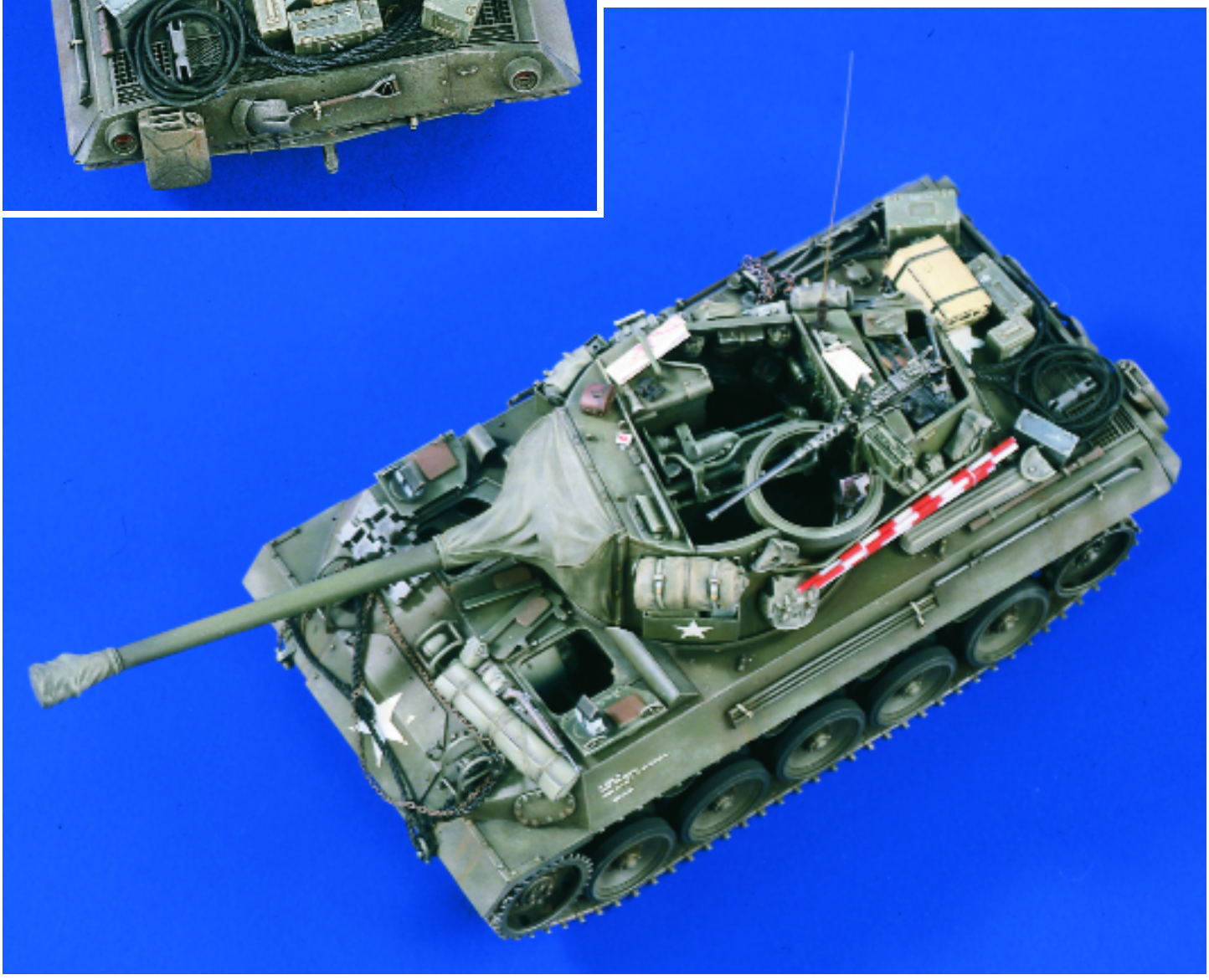


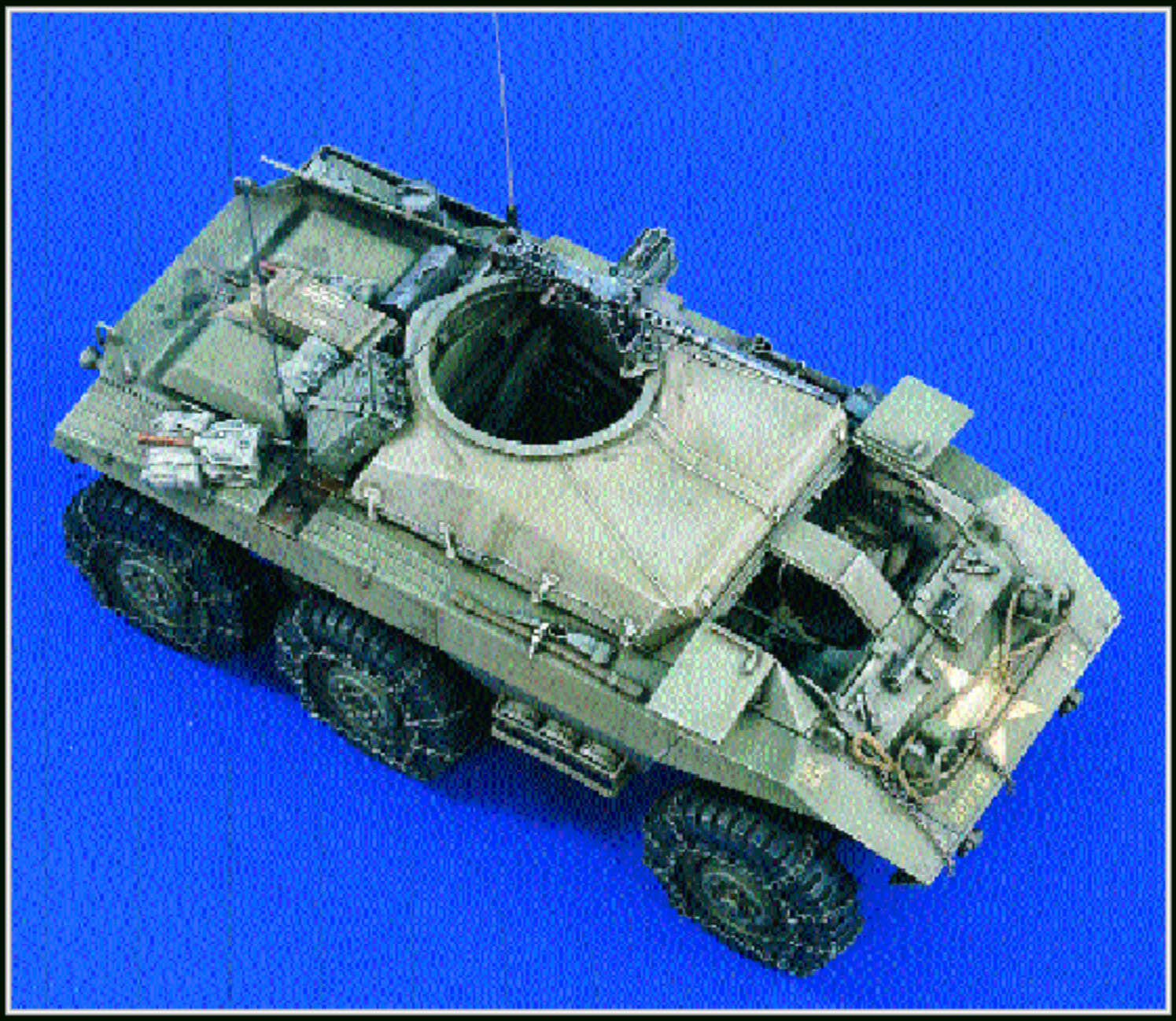
The real fun starts when adding the stowage, which is a must when a model is intended for a diorama. It is the final stage of building and weathering, adding various extra colors, and bringing life to the model by giving a "lived in" look. Studying wartime photo's, it still amazes me how much stuff crews dragged along with them. Sometimes I think that I am going too far with it, but after checking my reference books again I find that it is still not enough!



The turret tool box is removed for easy access to the stuff inside. Note on the engine deck the C-rations, ammo & tool boxes, rolled tow cable and hose, tow chain, etc. Each individual item needs to be carefully painted, weathered, shaded, and highlighted, which is a lot of work (almost as much as the tank itself), but looking at the final result, it is absolutely worthwhile.

A perfect shot for showing-off all of the various stowage items (all from the VP line). Note the gun calibration rods, made from plastic rod, and the pack of Lucky Strikes (and lighter) on the turret. These colorful items jump out of the drabness of the tank, drawing the eye into the details.





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